

APPLYING nuclear science and technology to the BENEFIT of CANADA

Atomic Energy of Canada Limited 2013 Annual Financial Report HEALTHY

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### Canadians The World

receive energy, health, environmental and economic BENEFITS from nuclear science and technology, with confidence that nuclear safety and security are assured.



2 Who We Are

and Analysis

Atomic Energy of Canada Limited is committed to:

#### An Innovative Canada

AECL is leading the development of Canada's next-generation nuclear technologies with its industry, government and academic partners.

#### A Safe Canada

AECL's innovative technologies are being harnessed to reduce the threat of nuclear proliferation and to help combat terrorism.

#### A Clean Canada

AECL is leading environmental remediation and restoration efforts in Canadian communities and nuclear sites across the country.

#### A Healthy Canada

Isotopes produced by AECL are used in millions of medical treatments and diagnostics across Canada and around the world every year.

#### A Skilled Canada

AECL's cutting-edge programs are helping Canada develop the talented, world-class workforce needed for the industry's future.

#### A Prosperous Canada

AECL is partnering with Canadian businesses to transfer its unique technologies and capabilities to Canada's private sector.

## 60 YEARS OF

#### Who We Are

For over 60 years, AECL has served the nation as Canada's premier nuclear science and technology organization. As the birthplace of the Canadian nuclear industry, AECL has spearheaded scientific advances that have enhanced the quality of life for Canadian citizens. From nuclear medicine that fights cancer to nuclear energy plants that power our homes, AECL technology has become part of our daily lives.

Today, AECL is the knowledge leader of the Canadian nuclear industry — a critical federal resource made up of world-class scientists, engineers, technologists and operational staff with unique research and development facilities. As a tier one nuclear nation, Canada is involved in virtually every aspect of the nuclear industry, and AECL contributes to Canada's knowledge advantage in these areas, conducting pioneering nuclear science and technology research and technical services in order to benefit Canada.

Through its value proposition, AECL is relied upon by government for credible, objective information related to nuclear science and technology. AECL also serves the government in important matters of public policy, including the provision of medical isotopes, the management and disposition of legacy liabilities and historic wastes, and support in the development of policies and national capabilities to address nuclear safety and security.

As an enabler of business innovation and technology transfer, AECL has a strong record in driving commercial success across the Canadian nuclear sector. Generations of Canadian organizations in and outside the nuclear industry have benefited from access to AECL facilities, expertise and technology. AECL continues to engage with the brightest minds across Canada to stimulate the innovation required for a safe, strong and prosperous future for the industry.

#### **Nuclear Industry Capability**

Ensures that the Canadian nuclear sector remains safe and productive with access to science and technology resources to address emergent technological challenges, and that Canada maintains a strong nuclear power sector.

#### **Nuclear Safety & Security**

Ensures that federal activities, regulations and policies related to nuclear or radiological issues are supported by the necessary expertise and facilities.

#### Clean, Safe Energy

Ensures the development of energy technologies that make a beneficial impact on Canada's use of clean energy.

#### Health,

**Isotopes & Radiation**Ensures that Canadians experience health benefits from nuclear science and technology.









# INDUATION

AECL's Chalk River Laboratories represent the largest single complex within Canada's science and technology infrastructure. The site contains several licensed nuclear facilities, including the National Research Universal (NRU) reactor and many other unique facilities and laboratories.

With over 3,250 highly skilled full-time employees delivering a wide range of vitally important nuclear services, from research and development to waste management and decommissioning, AECL's work is aligned to fulfil a single strategic outcome: Canadians and the world receive energy, health, environmental and economic benefits from nuclear science and technology, with confidence that nuclear safety and security are assured.

AECL undertakes a series of program activities, described below, that have been established to fulfil its strategic outcome. These programs are aligned with the Government of Canada's science and technology priorities, supporting a clean and healthy environment, healthy Canadians, a safe and secure Canada, and an innovative and knowledge-based economy.

AECL ACTIVITIES are carefully ALIGNED to support
Government of Canada PRIORITIES of a clean and healthy environment,
healthy Canadians, a safe and secure Canada, and an innovative and
knowledge-based economy.

#### Nuclear Environmental Stewardship

Addresses the Government of Canada's commitment to ensure Canada's federal nuclear sites are clean and healthy environments and to safely manage environmental risks.

#### Nuclear Innovation Networks

Ensures that Canadian science and technology communities can advance their innovation agendas through access to federal nuclear innovation infrastructure and expertise.

#### Mission-Ready Science & Technology Infrastructure

Ensures that scientists and engineers from AECL and its partner organizations have access to licensed facilities and services that enable nuclear innovation and production in a safe campus environment that is fully compliant with all legislation for conducting nuclear-related activities.

#### **Internal Services**

Ensures the business and administrative support functions and infrastructure to enable the efficient and effective delivery of AECL's output programs are maintained.









#### Message from the Chair

For six decades, AECL has fulfilled a critical mandate on behalf of Canadians, serving as the nation's premier nuclear science and technology organization. I'm pleased to report that this tradition of excellence continued in 2012–2013, a fiscal year made distinct as AECL's first full year as a stand-alone federal science and technology organization.

With the sale of AECL's Commercial Operations behind us, 2012—2013 was a year of significant progress for AECL. Our corporate vision, strategic outcome, and value proposition have all been aligned to the priorities of the federal government and our future direction is clear. Our program activities are now carefully positioned to support increased operational efficiency and effectiveness as well as economic development, business innovation, public safety and security and value—added research and development.

This year, the Board worked closely with AECL's leadership team to strengthen the organization's improvement agenda, its management systems and its business practices and processes. In doing so, AECL realized substantial improvement in the areas of accountability, transparency, efficiency and safety. Perhaps most importantly, we are well prepared to embrace the restructuring future that is unfolding before us.

The Government of Canada formally turned its attention to the restructuring of the Nuclear Laboratories this year with an announcement that it would engage in a competitive procurement process to restructure the management and operations of AECL. The Government of Canada will seek to implement a Government-owned Contractor-operated (GoCo) model at AECL. Once complete, this new management model is intended to bring private-sector rigour and efficiency to the operation of AECL's customer programs, research facilities and technological services.

With this change in leadership, the Government of Canada intends to reposition AECL's focus towards three key objectives: to address legacy liabilities accumulated during the 60 years of nuclear research and development at AECL sites; to ensure that AECL's nuclear capabilities and knowledge continue to support the Government of Canada in fulfilling its core roles and responsibilities; and to provide access to AECL facilities and resources on a commercial basis to address industry's need for in-depth nuclear science expertise.

This transition will mean that AECL will continue to bring significant benefits to Canadians for years to come, through a strong focus on its public policy mandates and strategic research and development. By putting AECL on stronger footing and by introducing private-sector discipline to the organization, it will ensure that AECL's world-class scientists and unique facilities continue to support the needs of Canada.





Throughout this process, the AECL Board of Directors will continue to provide the Government of Canada with our counsel. In providing this support, we will aid the Government of Canada's efforts to ensure that AECL continues to provide strategic benefits to its stakeholders and to put the conditions in place for a seamless transition to the GoCo model.

With this future in mind, the Board continued to provide AECL with the strategic direction and oversight required to maximize the organization's performance this year. The Board supported AECL management in the delivery of excellence in the organization's program activities, provided ongoing oversight and guidance in the development and implementation of AECL's new management system, and undertook strategic planning in the modelling of AECL activities. All this work ensures that AECL's direction is sound and that it has the proper oversight to ensure organizational accountability.

I was delighted to welcome two new members to the Board of Directors this year. Gregory Josey and Serge Dupont bring considerable leadership and experience to AECL during an important time of transition for our organization. I am also pleased to report that Dr. Robert Walker has agreed to continue in his role as President and Chief Executive Officer of AECL for another two-year period. During the year, two of our most senior Directors, Stella Thompson and Richard Boudreault, concluded their terms on our Board of Directors. Both Stella and Richard made significant contributions to the development and governance of AECL and their leadership and unstinting commitment will be significantly missed.

Looking forward, the Board of Directors approved AECL's 2013—2014 Corporate Plan, which provides AECL with strategic direction for the upcoming fiscal year and beyond. As we achieve this plan, the Board will continue to support the AECL leadership team and senior management in the delivery of AECL program activities. We will continue our efforts to position AECL for success. And, we will work to provide the necessary oversight to ensure that Canadian taxpayer money is carefully invested here at the Nuclear Laboratories.

In conclusion, I would like to extend my sincere thanks and gratitude to the hard work of my colleagues on the Board of Directors, as well as AECL management and staff during the past fiscal year. Your unwavering dedication to the development of nuclear science and technology to benefit Canada is something all Canadians should take pride in.

Peter Currie, Chair of the Board

#### Message from the President

A knowledge leader for the Canadian nuclear sector. An important national resource of world-class scientists, engineers, technologists and operators with unique, powerful facilities. A trusted agent of and advisor to government, an enabler of the innovation to power the Canadian economy and a resource that is developing the nuclear workforce of the future.

Welcome to the new AECL.

For 60 years, AECL has operated as Canada's premier nuclear science and technology organization, pioneering important applications that have improved the lives of millions of Canadians. This year was no exception. Our employees once again carried out the ambitious and innovative nuclear science and technology that has made AECL such a valuable national resource.

The past few years have brought great change to AECL. However, since the sale of our Commercial Operations, we have successfully stabilized the Nuclear Laboratories. Today, AECL is a fully functioning Crown corporation focused on a clear strategic outcome: to ensure that Canadians and the world receive energy, health, environmental and economic benefits from nuclear science and technology, with confidence that nuclear safety and security are assured.

Working in collaboration with AECL's Board of Directors, our executive team worked to ensure AECL sustained its momentum from 2011–2012. Our year began with the approval of AECL's 2012–2013 Corporate Plan by the Treasury Board of Canada. With the concurrence of the Government of Canada, AECL had a corporate planning architecture informed by their long-term vision for the Nuclear Laboratories. The approval of this plan provided AECL with a roadmap for the fiscal year, ensuring company resources were properly aligned.

This year, we successfully delivered against this plan, on budget and on schedule, while meeting the expectations of our customers and stakeholders.

In the execution of this work, AECL introduced a critical tool to enhance the effectiveness of the company's leadership. AECL's new management system ensures that our managers have a clear line of sight in meeting the Company's commitments, and provides the organization with a framework that fosters a strong culture of accountability and transparency. This new system is already delivering rewards on our journey to excellence.

This strong progress extended to AECL's value proposition. Our work to reduce the threat of nuclear proliferation included the successful construction of a prototype cargo inspection system to enhance national border security. This innovative technology has been developed in collaboration with a number of public and private collaborators, and uses naturally occurring radiation to detect illicit nuclear materials at Canada's borders.





As part of AECL's ongoing emphasis on public safety, we worked closely with our emergency response counterparts in local, provincial and national agencies to ensure that, together, we can provide a strong coordinated response to address emergency scenarios. In particular, AECL staff participated in a project by the Centre for Security Science that will help researchers better understand and respond to radiological bombs.

As a generator of highly qualified people, AECL continued to provide researchers from Canadian universities, private industry and American national laboratories with access to our facilities for world-class materials research. And, to share our valuable knowledge, AECL launched a peer-reviewed scientific journal, the AECL Nuclear Review, which showcases innovative nuclear science and technology results generated by AECL staff and collaborators.

With respect to federal liabilities, AECL's Fuel Packaging and Storage project achieved a major milestone with the transfer of a multi-million dollar package of automated handling, transportation and storage equipment that was manufactured here in Ontario. Major progress in the Port Hope Area Initiative was also realized and AECL entered an agreement with Enterprise Cape Breton Corporation to complete the decommissioning and remediation of storage buildings and lands associated with AECL's former heavy water plant site in Glace Bay, Nova Scotia.

These are only a few examples of the important work that was completed this fiscal year. In addition to these milestones, we continued to support the Government of Canada as it positions AECL for future success. As noted by Peter Currie, the second phase of restructuring is well underway and we are very much engaged in the decision–making process, with a strong voice in the organization's future and a clear understanding of our obligations in the interim.

I would like to thank the AECL Board of Directors, and AECL's management team and employees. Their hard work and dedication is worth celebrating, and their efforts this year helped realize a number of important benefits for our nation. And, of course, I want to acknowledge the support of the federal government, which continues to provide AECL with the financial resources needed to meet these commitments.

While we have 60 years of rich history in nuclear science and technology behind us, this has been a pivotal year in the evolution of our organization. We've adapted to the world around us, while we continue to build on our history. I'm optimistic that our future is bright, as we continue to fulfil a critical mandate for Canadians as the nation's premier nuclear science and technology organization.



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Robert Walker, President & Chief Executive Officer

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A NEW AECL

HEALTH & SAFETY

PROGRAM ACTIVITIES

#### 2012-2013 in Review

#### **AECL Restructuring**

In May 2009, the Government of Canada concluded that restructuring was necessary to position AECL to better compete in the global marketplace, reduce taxpayer financial exposure and create better conditions for the entire Canadian nuclear industry to succeed.

The Government of Canada subsequently launched a two-phase restructuring process, and in Phase 1, successfully concluded the sale of AECL's CANDU Reactor Division to Candu Energy Inc., a wholly-owned subsidiary of SNC-Lavalin, in October 2011.

Phase 2 of the restructuring was launched in early 2012 with a formal Request for Expression of Interest (RFEOI) to gather information on private-sector interest in the management and operation of AECL's Nuclear Laboratories. In February 2013, the Government of Canada announced it would engage in a competitive procurement process to restructure the management and operation of AECL, seeking to implement a GoCo model, as is done in other jurisdictions such as the United States and the United Kingdom.

The new model will bring private-sector rigour and efficiency to the management of AECL, which is expected to reduce the financial cost and risk for Canadian taxpayers over time. The objective is to focus the Nuclear Laboratories on managing its radioactive waste and decommissioning responsibilities, performing science and technology activities to meet core federal obligations, and supporting Canada's nuclear industry through access to AECL's unique facilities and expertise on a commercial basis. At the time of the announcement, the Government of Canada also stated its intention to assess the value of federal investment in an industry-driven nuclear innovation agenda.

Overall, AECL restructuring will ensure that Canadians are well-served by a cost-effective science and technology organization focused on meaningful results that benefit Canada.

AECL RESTRUCTURING will ENSURE that CANADIANS are well-served by a cost-effective science and technology organization focused on meaningful results that BENEFIT Canada.

## A PROSPERCUS

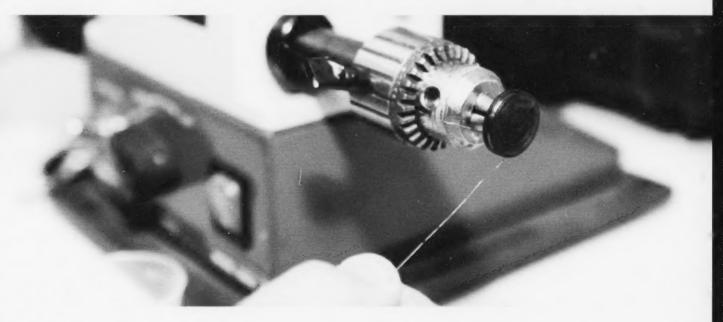
#### Health, Safety, Security and Environmental

Protecting the safety of employees, the public and the environment is critical to AECL's success. This year, AECL continued to improve its health, safety, security and environmental (HSSE) performance, making progress in strengthening its HSSE programs and practices.

This progress was communicated to Canada's nuclear regulator, the Canadian Nuclear Safety Commission (CNSC), in a meeting with the commission in February 2013. Since the renewal of the Chalk River site licence, AECL continued to meet its regulatory commitments and to operate the Chalk River site safely in a culture of continuous improvement.

In line with this philosophy, AECL established a new HSSE oversight framework to better mitigate safety risks. With an emphasis on alignment, the new division renews AECL's focus on its HSSE programs, which includes AECL Security, Fire Protection, Emergency Preparedness, Radiation Protection, Nuclear Materials Management, Human Performance and Occupational Health and Safety.

AECL also successfully completed its comprehensive safety culture assessment. This initiative included participation from AECL employees through detailed surveys, interviews and focus group sessions. With this valuable information in hand, AECL has a better understanding of its safety culture and improvement opportunities to help focus management action.





AECL continues to implement upgrades to its Chalk River site in response to the events at the Fukushima power plant in Japan in 2011. AECL has not only enhanced its emergency response programs and practices, but also improved its physical infrastructure and purchased important new emergency equipment.

#### **Program Activities**

#### **Nuclear Industry Capability**



The presence of a federal nuclear laboratory to address public policy issues of safety, and complex technological challenges from industry, helps ensure that Canada has a strong nuclear power sector. Through Nuclear Industry Capability, AECL provides industry with access to the expertise, facilities and technologies it requires to be successful in the marketplace and to seize global opportunities.

To encourage business innovation and transfer AECL technology to the private sector, AECL licensed two of its technologies to a private Canadian company this year. These AECL technologies address the needs of CANDU Owners Group (COG) members in estimating dose rates to personnel should a contamination event occur. By licensing this technology, AECL is working to support and grow Canada's private sector capabilities in addition to increasing company revenue.

AECL finalized an agreement with industry partners to manufacture Axial Diameter and Magnetite (ADAM) probes, a tool that inspects the health of steam generator tubing in nuclear power reactors. As part of the agreement, AECL will transfer the technical competence to a company that will manufacture the technology. Through this agreement, Canadian industry will retain the capability to manufacture these inspection probes directly for commercial customers, which aligns with a key component of AECL's value proposition.

Through this technology transfer, AECL is SUPPORTING the GROWTH of the private sector in Canada. Moving forward, this Canadian company will manufacture this INNOVATIVE AECL inspection **TECHNOLOGY** directly for its customers.

## A SAFE CANADA

On behalf of Candu Energy Inc., AECL successfully completed a baseline fuel channel inspection of the refurbished Wolsong 1 reactor in South Korea, marking the first time that this work had been carried out on a refurbished CANDU reactor that had been returned to service. AECL also informed Ontario Power Generation's decision to continue to operate the Pickering Nuclear Generating Station (PNGS) by demonstrating that the lifetime of the fuel channels in the reactors can be extended.

#### **Nuclear Safety & Security**



As the centre of federal expertise on nuclear and radiological issues, AECL maintains the security of several federal nuclear sites, develops technology that is used to assure Canada's nuclear safety and security, and provides emergency response capabilities and advice to government departments

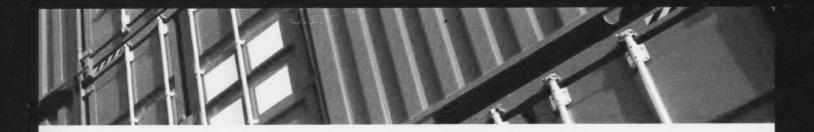
and international nuclear bodies. All of this work is carried out through Nuclear Safety & Security.

AECL continues to work in partnership with organizations across the country to strengthen Canada's national security. AECL staff participated in a research project this year led by the Centre for Security Science, part of Defence Research & Development Canada (DRDC). The project involved the controlled explosion of a simulated explosive known as a radiological dispersion device (RDD) in an effort to better understand RDDs, contributing to enhanced nuclear security in Canada and around the world.

Construction of a prototype cargo inspection system was successfully completed by AECL in collaboration with other Canadian government agencies, academia and private sector partners. The innovative new technology uses naturally occurring cosmic rays called muons to detect contraband nuclear materials hidden inside shipping containers, reducing the threat of nuclear proliferation through enhanced border security.

Led by AECL in partnership with several federal agencies, the Canadian National Nuclear Forensics Capability Project (CNNFCP) conducted a table–top exercise with its partners at DRDC. Nuclear forensics is the scientific analysis that contributes to the broader investigation of a nuclear security event. The exercise was designed to strengthen national capabilities in nuclear forensics, ensuring that the project is structured appropriately to fulfil its national security objectives.

AECL and its collaborators successfully CONSTRUCTED
a PROTOTYPE cargo INSPECTION SYSTEM that uses naturally occurring radiation to inspect shipping containers at Canada's borders,
REDUCING the THREAT of nuclear proliferation.



#### Clean, Safe Energy



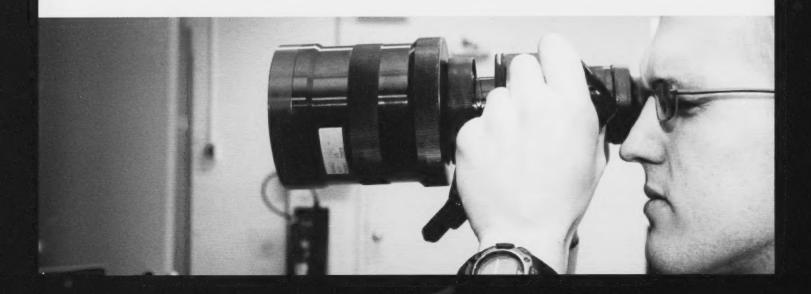
Clean, Safe Energy builds upon existing investments in nuclear energy technologies required to ensure that nuclear-related energy systems are safe. This is achieved by developing the systems, materials and infrastructures required for the next generation of nuclear reactors, the application

of hydrogen technologies for energy production and industrial applications, and to ensure that Canadians benefit from developments in fusion energy and small reactor technologies.

AECL made significant progress in the improvement of its Super-Critical Water Reactor (SCWR) design as part of Canada's contribution to the Generation IV International Forum, a cooperative international endeavour to establish the feasibility and performance capabilities of next-generation nuclear energy systems. Through this work, AECL is advancing nuclear energy technology and safety systems for Canada's next-generation reactors.

Working with Canadian industrial partner EcoVu, AECL helped demonstrate the removal of radioactive contaminants from a waste solution using EcoVu's patented purification technology. The process proved to be extremely effective for uranium and other heavy metals removal, and can be readily applied to a variety of environment and waste management cleanup actions. AECL's support helped the Canadian company demonstrate the applicability of its process and, as a result, access public and private sector funding.

AECL is ADVANCING nuclear energy TECHNOLOGY and SAFETY SYSTEMS for the next generation of nuclear reactors through its work REPRESENTING CANADA on the Generation IV International Forum.



## A HEALTHY CANADA

With respect to safety, an advanced mathematical model was developed by AECL that will enhance the development of future catalysts used in passive autocatalytic recombiners (PARs). PARs are an innovative safety technology designed by AECL that are used to address the risk of hydrogen explosions in nuclear plants and other facilities that use hydrogen.

#### Health, Isotopes & Radiation

The work carried out under *Health, Isotopes & Radiation* provides a reliable supply of medical isotopes to Canada and the international community for diagnostic applications and cancer treatments. It also focuses on increasing our knowledge of the effects of radiation to humans, which includes the evolving techniques and expertise required for ensuring a safe working environment at nuclear installations.

AECL continues to support the Canadian and global health community. Isotopes produced in AECL's NRU reactor this fiscal year enabled the delivery of approximately 2.5 million medical diagnostics and an estimated 14 million medical treatments for patients in Canada and around the world. These isotopes support the health and well-being of Canadian citizens, and the fight against cancer and heart disease.

AECL investigated how radiation-induced changes in cardiovascular disease are produced in partnership with the University of Ottawa Heart Institute. Also this year, AECL helped optimize a method used to determine aluminum content in patients with Alzheimer's disease in collaboration with McMaster University. AECL and McMaster are now discussing a possible project to assess the build-up of this metal in the aluminum industry workforce and in aluminum welders.

Isotopes produced by AECL this fiscal year ENABLED the DELIVERY of approximately 2.5 MILLION medical DIAGNOSTICS and an estimated 14 MILLION medical TREATMENTS for patients in Canada and around the world.



AECL also completed a number of high-priority improvement initiatives as part of its Integrated Implementation Plan (IIP). IIP is AECL's improvement plan to enhance the safety and reliability of the NRU reactor and is a condition of the Chalk River Laboratories operating licence. These activities included the biannual AECL Safety Culture Survey and the NRU Rod Bay Water Swap project, which removed over one million litres of tritiated water from the NRU rod bays. The completion of this work provides AECL with important facility and process improvements, and enhances employee and environmental safety.

#### **Nuclear Environmental Stewardship**



Through *Nuclear Environmental Stewardship*, AECL supports the Government of Canada by ensuring Canada's federal nuclear sites are clean and healthy environments, and by providing technologies, expertise and facilities to support the safe storage and long-term management of radioactive

waste in Canada.

AECL made important contributions to parameters and models for revisions of two Canadian Standards Association (CSA) standards that are key guidelines for assessing routine and accidental releases from nuclear facilities. The revised standards are used for the calculation of release limits and radiation doses to the public from radioactive materials and are expected to be released in the fall of 2013.

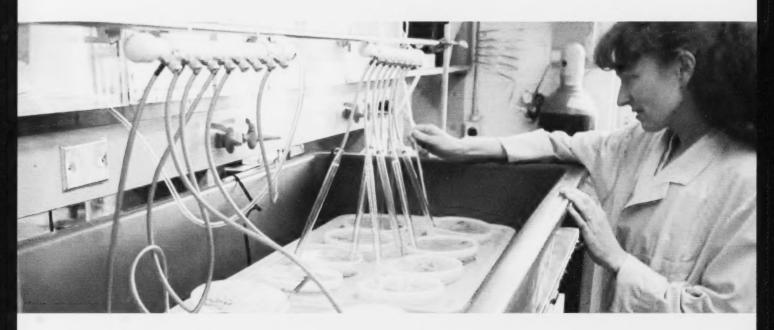


## A CLEAN CANADA

AECL and Public Works and Government Services Canada (PWGSC) advanced activities associated with the enabling infrastructure necessary to remediate historic low-level radioactive wastes as part of the Port Hope Area Initiative (PHAI). Also this year, AECL entered into an agreement with Enterprise Cape Breton Corporation (ECBC) to complete the decommissioning and remediation of storage buildings and lands associated with AECL's former heavy-water plant site in Glace Bay, Nova Scotia. Both of these projects address federal liabilities and will clean up local environments within Canadian communities.

AECL also conducted a review of its long-term decommissioning strategy and related cost estimate. This was the most comprehensive review of the strategy since 2005 and yielded an improved approach consistent with international best practices.

AECL is LEADING these environmental REMEDIATION and RESTORATION activities on behalf of the Government of Canada to address federal liabilities and clean up ENVIRONMENTS within Canadian COMMUNITIES.





#### **Nuclear Innovation Networks**



AECL maintains a suite of critical national science facilities that support the diverse innovation needs of Canada's nuclear and radiation science and technology community. *Nuclear Innovation Networks* connects AECL capabilities to this community to enable them to pursue their scientific

goals, including clean energy, cancer research and nuclear security.

This year, AECL launched its new open-access, peer-reviewed scientific journal, the AECL Nuclear Review. The semi-annual journal is a forum to publish innovative nuclear science and technology related papers and contributes to AECL's role as Canada's premier nuclear science and technology organization. Content includes scientific papers related to the CANDU nuclear industry, nuclear safeguards and security, clean energy, small reactors, sustainable energy and environmental sciences.

AECL and participants from the University Network of Excellence in Nuclear Engineering (UNENE) established new in-kind collaborative research and educational activities using AECL's unique science and technology facilities and expertise. UNENE is an alliance of universities, nuclear power utilities and government research and regulatory agencies whose mandate is to develop nuclear education and research capabilities in Canadian universities. Greater use of AECL laboratories will contribute to a sustainable supply of qualified professionals for the Canadian nuclear industry.

AECL also issued an external Call for Proposals that focuses on advancing AECL's science and technology priorities, using AECL's facilities and expertise, and promoting third-party engagement with academia, government laboratories and industry. This initiative represents an important opportunity to grow collaborations and partnerships with the broader industry.

AECL's NEW scientific journal — the AECL NUCLEAR REVIEW — is a GROWING MEDIUM for scientists from around the world to SHARE their RESEARCH and FINDINGS in disciplines spanning nuclear science and technology.

## AN INMOVATIVE

#### Mission-Ready Science & Technology Infrastructure



Scientists and engineers from AECL and partner organizations need access to licensed facilities and services to enable nuclear innovation. *Mission-Ready Science & Technology Infrastructure* invests in AECL people, plant and processes to achieve safe, reliable and efficient availability of its science

and technology infrastructure, while assuring the health and safety of employees, the community and the environment.

Ongoing upgrades to existing Chalk River infrastructure systems and facilities made strong progress this year.

The completion of these projects is fundamental to meeting regulatory and HSSE requirements, and to maintaining overall operational capability at the Chalk River site. Given that these requirements originated before the pending AECL restructuring, these investments are being funded by AECL through Government of Canada funding.

AECL also completed a series of activities to ensure the infrastructure at its Chalk River site is readily available for the company's program activity areas. This included the successful completion of the planned annual NRU extended outage to ensure the continued safe and reliable operation of the reactor to meet isotope production requirements and the needs of the Canadian nuclear industry, completion of upgrades to AECL's powerhouse to improve the supply of key utilities to the site, and early planning to revitalize the radioactive liquids management systems.



### CANADA

Finally, strong progress in the multi-year, multi-phase Energy Savings Contract (ESCO) project is contributing to substantial environmental improvements and bottom line cost savings at AECL. To date, the organization's carbon footprint has been reduced by 6,000 metric tons of carbon dioxide emissions on an annual basis.

#### Internal Services



In order to deliver on its strategic outcome, AECL requires a variety of business and administrative support functions and infrastructure. *Internal Services* consists of these services, which enables the efficient conduct of day-to-day business and compliance with applicable policies, regulations and legislation.

This year, AECL hosted the annual Organization of Canadian Nuclear Industries (OCI) Suppliers Day trade show, attended by more than 50 OCI member companies, and led a joint workshop to discuss innovation in Canada's nuclear supply chain. Supplier engagement is an important element of AECL's supply chain and innovation strategies. The events were an excellent opportunity to build relationships within the Canadian nuclear supply chain and to explore new commercial opportunities.

Risk management is an integral part of sound strategic planning and corporate governance at AECL. AECL introduced new policies that enhance its formal contract structuring process on major or high-risk projects to ensure effective execution of contracts and minimum risk to AECL and the Government of Canada. AECL also initiated a review of its IT security and governance in order to enhance the role of IT as a strategic enabler of AECL's output activities, which is expected to improve the maturity of IT processes and improve risk management.

AECL also signed a Memorandum of Understanding with the Canada Border Services Agency (CBSA) under the CBSA Partners in Protection program, concluding a multi-year initiative with U.S. and Canada customs. This program is voluntary and enlists the cooperation of industry to enhance border and trade security, combat organized crime and terrorism, and help prevent contraband smuggling. Member companies are recognized as trusted traders, which strengthens the reliability of AECL's international supply chain.



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#### Management's Discussion and Analysis



#### Forward-Looking Statements

This Management's Discussion and Analysis (MD&A) has been reviewed by AECL's Audit Committee and approved by AECL's Board of Directors. It provides comments on the performance of the Corporation for the year ended March 31, 2013 and should be read in conjunction with the consolidated financial statements and accompanying notes included in this Annual Report.

The Government of Canada completed the first phase of its restructuring plan for AECL with the sale of AECL's Commercial Operations business to Candu Energy Inc., a wholly-owned subsidiary of SNC-Lavalin, on October 2, 2011.

In February 2012, the Government of Canada formally launched the second phase of the AECL restructuring plan. As part of this process, the Government of Canada issued a Request for Expression of Interest (RFEOI) to understand potential opportunities for partnership models in relation to the Nuclear Laboratories and the relevant experience and capabilities offered by respondents. The information gathered through the RFEOI helped inform the restructuring process, a critical step to further strengthen Canada's nuclear industry while reducing taxpayer exposure to financial risks in this sector.

In February 2013, the Government of Canada announced its intention to contract with the private sector for the management of AECL operations. Under this model, AECL's activities will be focused on managing its radioactive waste and decommissioning responsibilities, performing science and technology activities to meet core federal obligations, and supporting Canada's nuclear industry through access to world-class facilities and expertise on a commercial basis. The Government of Canada is assessing the value of investing federal tax dollars in a fourth objective focused on longer-term nuclear innovation.

Throughout the process, the Government of Canada will seek third party advice in the form of external advisors who will provide nuclear management and financial management expertise. The competitive procurement process for the GoCo contractor will follow government policies and best practices in engagement, oversight, transparency and due diligence. AECL management is supporting the process, which is expected to conclude in 2015. Ultimate selection of the contractor is at the sole discretion of the Shareholder.

This MD&A contains forward-looking statements with respect to AECL based on assumptions that management considers reasonable as at July 23, 2013, when the Corporation's Board of Directors approved this document. These forward-looking statements, by their nature, necessarily involve risks and uncertainties that could cause future results to differ materially from current expectations. We caution the reader that the assumptions regarding future events, many of which are difficult to predict, may ultimately require revision.

#### Organization

AECL is an agent Crown corporation reporting to Parliament through the Minister of Natural Resources.

Management evaluates its financial results through two distinct business entities: Nuclear Laboratories and Commercial Operations (Discontinued Operations). Each entity is responsible for achieving its business goals as established in AECL's Corporate Plan.

#### **Nuclear Laboratories**

Nuclear Laboratories is principally centred at the Chalk River Laboratories and is Canada's largest federal laboratory. As of March 31, 2013, Nuclear Laboratories employed over 3,250 full-time employees. Of those, 475 were employed in other locations, including the Whiteshell Laboratories in Manitoba.

Nuclear Laboratories is a strategic element in Canada's national science and technology infrastructure and national innovation system. As Canada's premier nuclear science and technology organization, Nuclear Laboratories provides crucial policy, program and innovation support to the Government of Canada, the Canadian nuclear industry and to Canadian academia.

Activities within the Nuclear Laboratories are aligned with the federal science and technology strategy, Mobilizing Science and Technology to Canada's Advantage. Through alignment with this strategy, Nuclear Laboratories makes a significant contribution to four of the Government of Canada's Outcome Areas: an innovative and knowledge-based economy, a clean and healthy environment, healthy Canadians, and a safe and secure Canada.

The Nuclear Laboratories is an advisor to, and agent of, the Government of Canada for public policy purposes; an enabler of business innovation and technology transfer; and a generator of highly qualified people.

#### Advisor to, and agent of, the Government of Canada for Public Policy Purposes

The Nuclear Laboratories is relied upon for the provision of unbiased information related to nuclear science and technology, providing advice in support of the Government of Canada in its various capacities as policy maker, regulator, operator, performer, customer and partner for science and technology in the public good.

Nuclear Laboratories is also an agent of the Government of Canada in several matters of public policy, including:

- The provision of medical isotopes to Canadians. As one of the world's largest producers of radionuclides, the National Research Universal (NRU) reactor is a multi-purpose research reactor that is Canada's premier facility for nuclear power and materials research. The NRU reactor produces a range of radioisotopes that are used for medical imaging, cancer diagnostics and therapy.
- The management and disposition of liabilities associated with legacy and historic wastes resulting from past development of nuclear technology and nuclear energy in Canada.
- > The development of practices, national capabilities and support of policy development to address nuclear safety and security, including strengthening of non-proliferation and counter-terrorism regimes.

#### Enabler of Business Innovation and Technology Transfer

The Nuclear Laboratories has had a strong record of positioning the Canadian nuclear industry, including its full value chain, for third party success domestically and internationally. Going forward, the Nuclear Laboratories will continue to engage with the best and brightest innovators and entrepreneurs from around the world, keeping home-grown talent in Canada and stimulating innovation throughout the industry and its supply chain. Greater engagement with businesses will also result in greater revenues to offset the requirement for federal funding.

As a service provider to Candu Energy Inc. and the wider Canadian nuclear industry, the Nuclear Laboratories plays a crucial role in assisting its partners to maintain and enhance the performance of the CANDU fleet, to develop new technologies for a broad range of nuclear power and non-power applications, and to advance the next generation of reactors, fuels, and energy solutions.

#### Generator of Highly Qualified People

With its capability for knowledge generation, innovation and discovery, the Nuclear Laboratories supports an extensive network of stakeholders, clients and partners.

The Nuclear Laboratories provides access to the unique environment needed to develop the advanced workforce required for a knowledge-based economy. Generations of Canadians along the nuclear science and technology value chain have benefited from access to the organization's laboratories, facilities and highly trained staff. An examination of the human capital resident in both the Canadian nuclear science and technology community and the Canadian nuclear industry community reveals that many have had a deep and enduring connection to AECL.

As a result of the Nuclear Laboratories operations, Canada's next generation of outstanding nuclear scientists, engineers, operators and entrepreneurs are being trained. The Nuclear Laboratories will continue to support the development of highly qualified people for the public sector, private sector and academia by ensuring its activities continue to be oriented toward those areas that are relevant to the priorities of the Government of Canada.

Activities at the Nuclear Laboratories are principally supported by the Government of Canada. Revenue is also generated from the sale of products and services, including medical isotopes, research contracts for the CANDU Owners Group (COG), and commercial waste management services for various organizations, including hospitals and universities. This Nuclear Laboratories commercial activity contributed \$84 million to revenues during the fiscal year.

Expenditures are managed to specific targets based on committed funding levels and commercial revenues. Funding is largely derived from federal appropriations and is used to support operations and infrastructure initiatives.

#### Commercial Operations (Discontinued Operations)

As of March 31, 2013, Commercial Operations (Discontinued Operations) employed 23 people, operating under the Wrap-Up Office in Oakville, Ontario. This team is responsible for addressing all liabilities related to the Commercial Operations business retained by the Government of Canada and AECL at the date of the October 2, 2011 restructuring. This includes the completion of AECL's life extension project liabilities.

#### Key Success Drivers and Capabilities to Deliver Results

#### Safety

AECL reinforces a culture that protects the safety of its employees, the public and the environment to ensure healthy Canadians and a safe and secure nation, in alignment with Government of Canada priorities. Program initiatives also ensure that the expectations and requirements of AECL's key stakeholders, including governments, the CNSC, customers and the public are met. During 2012–2013, safety continued to be a major priority in maintaining a healthy workforce and an effective business environment.

Significant focus was placed on AECL's health, safety, security and environment (HSSE) program this year. Initiatives included the establishment of a robust HSSE oversight framework focused on mitigating safety risks, the execution of a third party review of the security program culture, the launch of improved Occupational Health and Safety governing procedures with clear performance requirements, improvements to AECL's emergency response capabilities and the purchase of new fire equipment.

At fiscal year-end, AECL recorded an increase in the number of Recordable Lost Time Injuries compared to 2011–2012. This result is mainly attributable to increased slips and falls during the winter and improper lifting techniques leading to minor back strains. AECL has taken action to address this issue through improvements to site maintenance, employee awareness, safety procedures, training and AECL's Return to Work program.

#### **Customer Commitment**

AECL recognizes that customer satisfaction is critical to its success as Canada's premier nuclear science and technology organization. Efforts are underway to further evolve AECL into a customer-driven science and technology company. Customer feedback mechanisms continue to provide AECL with valuable insight into meeting customer expectations. AECL has been working cooperatively with its customers in government and industry to provide high-quality products and services in a timely and cost-effective manner.

AECL's commitment to its customers was demonstrated throughout the year through a number of initiatives. AECL developed and delivered two comprehensive reports to COG, helping the organization's members better maintain and reliably operate their stations; supplied significant quantities of medical isotopes to the global market, helping to meet world demand; and demonstrated proof-of-concept on several ECG reactor safety systems to Candu Energy Inc. to support safety and licensing analysis.

#### Research and Development

The success of the Canadian nuclear industry is founded on AECL's broad research and development capabilities. AECL generates substantial intellectual capital and maintains a significant research and development infrastructure through its Nuclear Laboratories, which is utilized by the majority of AECL's program activity areas.

This year, AECL continued to focus research and development on the application of science and technology to enhance the safety and performance of the existing CANDU fleet. Research and development also involved initiatives to develop new energy generation technologies based on nuclear science and technology; advance the next generation of reactors and fuels with the goal of exceeding international standards for proliferation resistance and operating efficiencies; and develop technologies to aid in national and international nuclear counter-terrorism and safeguards efforts.



AECL provides support to meet Canada's international nuclear policy commitments, including participation in the International Atomic Energy Agency and the Generation IV International Forum. AECL's research and development capabilities also contribute to the advancement of science in Canada through AECL's support of the academic community and the broader nuclear industry. This fiscal year, AECL participated in 147 science and technology collaborations with Canadian and international government bodies, academic institutions and private sector organizations.

These initiatives drive innovation and technology advancement and contribute to the training of highly qualified personnel for the future, in both nuclear and non-nuclear sectors. This reflects an evolving focus on research and development in the Canadian nuclear community, where leadership and the integration of expertise from universities and other organizations is central to the development of nuclear technology for the benefit of all Canadians.

This year, AECL also filed 20 new patents for state-of-the-art technologies which can be applied to protect the health of Canadians and further customer goals. Technology transfer from these innovations supports Canadian health and safety and encourages long-term business competitiveness, contributing to a knowledge-based, entrepreneurial economy.

#### **Supply Chain**

AECL's ability to execute programs as the Government of Canada's premier nuclear science and technology organization is dependent on growing a strong supply chain. AECL is supported by more than 170 Canadian member-companies of the Organization of Canadian Nuclear Industries (OCI), as well as a broad community of suppliers, which executed approximately one third of AECL's program in 2012—2013. AECL also supports existing suppliers in expanding their service provision and new suppliers in attaining nuclear qualifications, ensuring that AECL suppliers realize competitive advantage through the execution of AECL contracts.

#### **Government of Canada Support**

Government of Canada funding supported AECL business requirements throughout the year. The funding helped AECL's Nuclear Laboratories to fulfil its program activity objectives in alignment with federal policies on safety and security, healthy Canadians, a clean and healthy environment and an innovative, knowledge-based economy. The funding also helped AECL to address the Commercial Operations liabilities retained at date of sale during the 2011–2012 fiscal year.

Government of Canada funding in 2012-2013 contributed to:

- > Operational requirements related to advancing commercial commitments.
- > The nuclear research and development program, Chalk River Laboratories infrastructure renewal (Project New Lease) and ongoing operations (base operations and Isotope Supply Reliability Program).
- > The Nuclear Legacy Liabilities Program.
- > Costs relating to Commercial Operations (Discontinued Operations) life extension projects for which AECL retains contractual responsibility.

AECL receives Government of Canada support for its activities through the approval of AECL's Corporate Plan by the Governor in Council. AECL's 2012–2013 Corporate Plan was approved by the Government of Canada in April 2012. In 2012–2013, Government of Canada funding in the amount of \$552 million was received to support AECL's activities.

#### Skilled Human Resources

AECL's highly educated and skilled workforce is the company's primary resource for ensuring its current and future success. Changing workforce demographics and global talent trends influence the development of AECL strategies on recruiting, engaging, deploying and retaining talent.

AECL fosters a work environment in which organizational and individual continuous learning and performance improvement is embraced. Iraining, self-assessment, corrective actions and benchmarking are used to stimulate learning. Online and e-learning courses continue to be used strategically to deliver skills on-demand to individuals and provide company-wide compliance training.

Frequent and diverse employee communications initiatives were delivered on key issues of organizational importance, including AECL Phase 2 restructuring, AECL's Program Activity Architecture and value proposition. External outreach activities during the year also identified science and technology initiatives to help generate highly qualified people to support AECL and the nuclear industry.

AECL is home to top scientific, engineering and technological talents, in addition to broadly experienced managerial and business personnel. AECL continues to develop and maintain a working environment that will attract, retain, develop and motivate appropriately skilled employees in order to meet business requirements.

#### Consolidated Financial Review

#### **Key Financial Information**

| (\$ millions)  | Actual Results |         |
|--|----------------|---------|
|  | 2012-13        | 2011-12 |
|  | \$             | \$      |
| Revenue  |                |         |
| Nuclear Laboratories   | 87             | 76      |
| Commercial Operations (Discontinued Operations)                          | 97             | 278     |
| Total revenue  | 184            | 354     |
| Gross margin before funding  |                |         |
| Nuclear Laboratories   | 38             | 33      |
| Commercial Operations (Discontinued Operations)                          | 76             | 31      |
| Total gross margin before funding  | 114            | 64      |
| Funding  |                | 227     |
| Parliamentary appropriations — operating                                 | 492            | 674     |
| Parliamentary appropriations — capital                                   | 60             | 45      |
| Other funding — operating  | 133            | 137     |
| Cost recovery from third parties and other                               | 32             | 18      |
| Amortization of Deferred capital funding                                 | 13             | 10      |
| Total funding  | 730            | 884     |
| Net (loss) income by business entity before Parliamentary appropriations |                |         |
| Nuclear Laboratories   | (2,618)        | (1,692) |
| Commercial Operations (Discontinued Operations)                          | 33             | (136)   |
| Net loss before Parliamentary appropriations                             | (2,585)        | (1,828) |

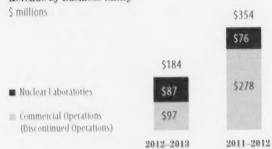
#### Revenue

Consolidated revenues decreased by approximately 50% from the previous year to \$184 million in 2012–2013.

This decrease resulted primarily from the sale of AECL's Commercial Operations in 2011–2012 and the substantial completion of all major work activities associated with the Bruce Retube Project in late 2011–2012 and the Point Lepreau Nuclear Generating Station early in this fiscal year. Included in the 2012–2013 Commercial Operations (Discontinued Operations) revenue were adjustments to reflect a reduction in the estimated costs to close out each of its existing life extension contracts.

Nuclear Laboratories revenue increased 14% from the previous year to \$87 million. These improvements can be attributed primarily to work performed under contract for Candu Energy Inc. and increased heavy water sales.

#### Revenue by Business Entity



#### **Gross Margins**

Consolidated gross margins increased by \$50 million in 2012-2013 to \$114 million from \$64 million in 2011-2012.

This improvement was mainly due to adjustments recorded in 2011–2012 to reflect the terms of the subcontract agreement with Candu Energy Inc. to complete AECL's life extension projects. Also contributing to the increase was a 2012–2013 adjustment to reduce the estimated costs to close out certain life extension projects. This reduction has resulted in a reversal of costs previously charged to income and carried on the balance sheet as an accrued contract loss provision. These impacts were partially offset by reduced margins on Commercial Operations' Services as a result of the sale of this business in 2011–2012.

Increased margins achieved by Nuclear Laboratories were a direct result of the increased revenues described above.

#### **Funding**

Total funding in 2012–2013 for operating and capital activities was \$730 million (2011–2012: \$884 million). This decrease in funding was primarily due to reduced funding required by the Wrap-Up office due to the sale of the Commercial Operations during the 2011–2012 year and the completion of life extension projects late in the 2011–2012 fiscal year and early in the 2012–2013 fiscal year.

The 2012-2013 funding included:

- \$213 million to support the Wrap-Up Office and Commercial Operations (Discontinued Operations) including life extension projects, EC6 development and operating and restructuring costs.
- > \$171 million for research and development, mainly supporting ongoing Chalk River site operations.
- > \$156 million to address regulatory, health, safety, security and environmental needs. The funding supported Project New Lease (infrastructure renewal) and the Isotope Supply Reliability Program (NRU operations and licence renewal) initiatives, at AECL's Chalk River site.
- > Decommissioning and waste management funding requirements declined to \$133 million from \$137 million in 2011–2012. Funding is provided through Natural Resources Canada and is based on AECL's expenditures incurred to reduce the liability.
- > Funding of \$12 million for isotope legacy obligations (the discontinued Dedicated Isotope Facilities) to meet contractual obligations and defend contractual rights.
- Cost recoveries from third parties and other funding totalled \$45 million. This includes amortization of deferred capital funding related to Government of Canada-funded infrastructure, mainly at Chalk River. In addition, cost recoveries reported under Nuclear Laboratories included support for activities by the Low-Level Radioactive Waste Management Office and Port Hope Area Initiative Management Office.

#### Funding 2012-2013

Funding \$730 million

(Operating \$657 million, Capital \$73 million)



#### Funding 2011-2012

Funding \$884 million

(Operating \$829 million, Capital \$55 million)



#### Net Income/Loss Before Parliamentary Appropriations by Operational Organization

AECL reported a net loss of \$2,585 million in 2012-2013, compared to a net loss of \$1,828 million in 2011-2012, both before Parliamentary appropriations.

Nuclear Laboratories reported a \$2.618 million net loss in 2012–2013 compared to a \$1.692 million net loss in the previous year, both before Parliamentary appropriations. The increased net loss in the current year was driven by the adjustment recorded in the Decommissioning and waste management provision.

AECL reviewed and updated its nuclear decommissioning and waste management strategy and associated liability cost estimate. This review was the first comprehensive review of this nature since 2005 and was intended to reflect best global policies and practices in nuclear decommissioning and waste management. The review leveraged experience gained to date from the program and employed alternative cost estimating methodologies for the projects comprising the liability. The review also included a revision to the site operational and corporate support costs, shared among the multiple mandates executed at AECL's Chalk River Laboratories (CRL), attributable to the decommissioning and waste management over the program plan period. The review resulted in an increase in the cost estimate of many of the projects comprising the liability as well the portion of corporate services and site operations support costs attributed to the decommissioning liability. This revised cost estimate accounted for \$2,053 million of the reported \$2,282 million Revaluation loss on decommissioning and waste management liability and other. The reported liability and loss on revaluation is also affected by the change in the interest rate used to discount (net present value) the future cash flows.

The prior year's loss was impacted primarily by a significant increase in the decommissioning and waste management provision resulting from a change in the discount rate from the previous period. Under International Financial Reporting Standards (IFRS), the reported Decommissioning and Waste Management liability is re-valued on each reporting date on a discounted or net present value basis using the discount rate in effect at the end of the period. When the discount rate decreases, the liability increases. Conversely, when the discount rate increases, the liability decreases. In both cases, the change in liability impacts the company's reported net income or net loss, but is a non-cash income or expense that does not impact AECL's funding requirements of the reporting year.

The March 31, 2013 rate was 2.50%, a decrease of 0.16% from the previous year. Comparatively, the decrease in the 2012 fiscal year was 1.09% and accounted for approximately \$1.2 billion of the net loss in that year.

In 2012–2013, Commercial Operations (Discontinued Operations) recorded a net income of \$33 million compared to a net loss of \$136 million in the previous year. This difference was primarily driven by the impairment and restructuring costs recorded as a result of the sale of this business. and the adjustment to revenue and costs relating to AECL's subcontract agreement with Candu Energy Inc., all recorded in 2011–2012.

2012-2013 Results Compared to Corporate Plan

| 2013           |  |
|----------------|--|
| Actual Results | Corporate Plan                                   |
| \$             | \$   |
|                |  |
| 87             | 85   |
| 97             | 125  |
| 184            | 210  |
|                |  |
| 38             | 38   |
| 76             | (22)   |
| 114            | 16   |
|                |  |
| (2,618)        | (470)  |
| 33             | (79)   |
| (2,585)        | (549)  |
|                | Actual Results \$ 87 97 184 38 76 114 (2,618) 33 |

Nuclear Laboratories reported a net loss before Parliamentary appropriations of \$2,618 million compared to a planned net loss of \$470 million. This variance mostly relates to the Revaluation loss on the decommissioning and waste management provision and other which was not projected in the Corporate Plan.

Commercial Operations (Discontinued Operations) reported a net income before Parliamentary appropriations of \$33 million compared to a planned loss of \$79 million. This positive variance is primarily the result of lower than expected costs to support the completion of the EC6 development program and the reversal of costs to complete the life extension projects that were charged to income in prior years and carried on the balance sheet as an accrued contract loss provision.

#### Operating Review

#### **Nuclear Laboratories**

#### **Program Activities**

- > Nuclear Industry Capability
- > Nuclear Safety & Security
- > Clean, Safe Energy
- > Health, Isotopes & Radiation
- > Nuclear Environmental Stewardship
- > Nuclear Innovation Networks
- > Mission-Ready Science & Technology Infrastructure
- > Internal Services

#### 2012-2013 Goals

- AECL is committed to excelling in the delivery of its value proposition by meeting and exceeding its commitments as expressed in its program activity plans.
- > AECL is to focus on priorities set jointly with its Shareholder and stakeholders.

#### 2012-2013 Priorities

- 1. Meet and exceed AECL program commitments.
- 2. Improve AECL alignment, effectiveness and efficiency through the following six Action Areas:
  - A. Focus on AECL's Science & Technology Priorities: AECL's program activities will focus on its Science & Technology Priorities, which translate federal and stakeholder Science & Technology Priorities to the necessary detail for effective program activity management.
  - B. Implement a Robust Program Governance: Each program activity will enhance its effectiveness through a governance structure that engages stakeholders to direct, execute, and exploit the results of each activity.
  - C. Enhance Productivity: Productivity improvements will be implemented, focused on program activity results, and informed by a review of all activities. The AECL Performance Measurement Framework will be used to target improvements and to subsequently gauge progress.
  - D. Stimulate Business Innovation: AECL assets will be used for the benefit of Canadian industries and Canadian researchers to promote innovation, develop highly qualified people, and exploit AECL's intellectual property.
  - Leverage Collaborations: Program activity delivery, scope and effectiveness will be enhanced by having AECL leverage more collaborations
    that directly contribute to program activity objectives.
  - F. Improve Multi-year Management of Infrastructure Recapitalization: The revisited recapitalization strategy will consider various delivery mechanisms and approaches including alternative financial arrangements for supporting multi-year projects.

Actual Doculto

#### Financial Review

|  | ACTUAL RESULTS |         |
|--|----------------|---------|
| (5 millions)   | 2012-13        | 2011-12 |
|  | \$             | \$      |
| Revenue and Funding  |                |         |
| Revenue  | 87             | 76      |
| Cost recoveries from third parties and other                                 | 32             | 18      |
| Amortization of Deferred capital funding                                     | 13             | 10      |
| Total revenue and funding  | 132            | 104     |
| Gross margin before Parliamentary appropriations                             | 38             | 33      |
| Operating expenses   | 416            | 381     |
| Net loss before decommissioning and Parliamentary appropriations             | (325)          | (311)   |
| Decommissioning  |                |         |
| Funding  | 133            | 137     |
| Revaluation loss on decommissioning and waste management provision and other | (2,282)        | (1,368) |
| Financial expenses   | (144)          | (150)   |
| Decommissioning net loss   | (2,293)        | (1,381) |
| Net loss before Parliamentary appropriations                                 | (2,618)        | (1,692) |
|  |                |         |

#### Revenue

In 2012–2013, Nuclear Laboratories revenue increased to \$87 million (2011–2012: \$76 million). Revenue included isotope sales, commercial technology sales, nuclear waste management and research and development activities performed for the CANDU Owners Group. This improvement can be attributed primarily to work performed under contract for Candu Energy Inc. and increased heavy water sales.

In providing research and development support to the CANDU Owners Group, Nuclear Laboratories contributes to fulfilling its mandate to maintain the CANDU safety, licensing and design basis for Canadian utilities. Revenues from these activities decreased to \$22 million in 2012–2013 from \$26 million in 2011–2012.

#### Gross Margin

Gross margin increased by \$5 million in 2012–2013 to \$38 million. This increase stems primarily from the increased revenues described above and, as a percentage of revenue, is consistent with 2011–2012.

#### Cost Recoveries from Third Parties and Other

Nuclear Laboratories manages historic wastes through the Low-Level Radioactive Waste Management Office and Port Hope Area Initiative Management Office on a cost recovery basis for Natural Resources Canada. The activities help to ensure sound environmental stewardship for Canada and represent the majority of AECL's cost recoveries. Natural Resources Canada provided \$31 million in funding in 2012–2013 to support both program offices' initiatives. This level of funding represents a \$14 million increase over 2011–2012. Additionally, \$1 million in cost recovery funding was received in 2012–2013 to support other initiatives.

#### Operating Expenses

Nuclear Laboratories operating expenses were \$416 million in 2012–2013 compared to \$381 million in 2011–2012. With the exception of an \$8 million increase to the Employee benefits liability resulting from the elimination of the voluntary termination compensation, the 2012–2013 results are generally comparable to those of the prior period.

#### Net Loss before Decommissioning and Parliamentary Appropriations

Nuclear Laboratories reported a net loss before Decommissioning and Parliamentary appropriations of \$325 million in 2012–2013 compared to a \$311 million net loss in 2011–2012. This decrease in net loss was the result of the increases in gross margins and funding which were partially offset by the increase in operating expenses, as discussed above.

#### Decommissioning Funding

Nuclear Laboratories received funding for the Nuclear Legacy Liabilities Program, a Government of Canada-funded initiative to address radioactive waste and decommissioning liabilities associated with AECL sites.

Funding recognized during 2012–2013 was \$133 million, compared to \$137 million the previous year. The related expenditures reduced the decommissioning and waste management liability. The decrease in expenditures over the previous year is largely the result of the substantial completion of an enabling facility at the Chalk River site in 2012–2013. This reduction was partially offset by increased costs due to the agreement to complete the decommissioning and remediation of storage buildings and lands associated with AECL's former heavy water plant site in Glace Bay, Nova Scotia.

Decommissioning expenditures at Whiteshell remained consistent with those of the prior year.

#### Revaluation Loss and Financial Expenses

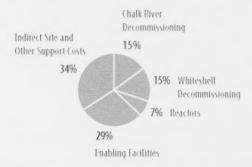
The Revaluation loss on decommissioning and waste management provision and other increased to \$2,282 million in 2012–2013 from \$1,368 million in the previous year. The 2012–2013 loss is primarily the result of a re-estimate of the decommissioning liability, as previously discussed.

The 2011–2012 reported loss on revaluation was largely the result of an increase to the decommissioning and waste management provision to reflect revised discount rates used to calculate the liability. This was a non-cash expense and reflects the lower rate in effect at the end of the year used to discount the estimated future decommissioning and waste management costs.

Financial expenses in 2012–2013 of \$144 million, which primarily included the unwinding of the discount on the decommissioning and waste management provision (accretion expense), were consistent with 2011–2012, which were \$150 million.

#### Decommissioning Liability 2012-2013

\$7,970 million



#### Outlook

The Nuclear Laboratories will continue to fulfil its customer and stakeholder commitments as outlined in AECL's Corporate Plan.

#### 2013-2014 Priorities and Deliverables

As AECL enters its second year as a stand-alone science and technology organization, the strategic direction over the planning period will be to successfully deliver its value proposition while implementing strategic improvements within key areas of its management system, and participating in Phase 2 of restructuring.

Based on a strategic analysis that was initiated in August 2012, and subsequent engagements with AECL's Board of Directors and the Shareholder, AECL's President and CEO set the following direction for the five year period covered by the plan:

- > Respect Nuclear Safety
- > Live Within Our Means
- > Sustain Value
- > Be Ready for Transition
- > Adjust Customer-Supplier Arrangements

To deliver on this direction, AECL will focus on two areas that are of particular significance: strategic improvements and strategic capabilities.

Strategic improvements are initiatives to enhance program governance, enhance productivity, stimulate business innovation and leverage collaborations.

Strategic capabilities include the people, tools and technologies that will enable AECL to: execute current and future program activities; contribute to Canada's nuclear science and technology industry network; position AECL to address the current and emerging needs of other federal departments and agencies; and give AECL the basis for competitive advantage in the market.

#### Commercial Operations (Discontinued Operations)

#### 2012-2013 Goals

The goals set out for Commercial Operations reflect those of the discontinued commercial operations.

- > Effectively manage the subcontract agreement with Candu Energy Inc. for the completion of remaining life extension project liabilities.
- > Discharge outstanding claims and litigation relating to Commercial Operations work pre-closing.
- Effectively manage the financial support for the reactor technology (EC6) development.

#### 2012-2013 Priorities

- > Complete life extension projects.
- > Complete the financial support for the EC6 development activities.

| Financial Review  |         |                |  |
|---|---------|----------------|--|
|   | Actual  | Actual Results |  |
| (\$ millions)   | 2012-13 | 2011-12        |  |
|   | \$      | \$             |  |
| Revenue   |         |                |  |
| Reactor life extension  | 97      | 223            |  |
| Services  | _       | 55             |  |
| Total revenue   | 97      | 278            |  |
| Gross margin  |         |                |  |
| Reactor life extension  | 76      | 8              |  |
| Services  | _       | 23             |  |
| Total gross margin  | 76      | 31             |  |
| Operating expenses  | 41      | 126            |  |
| Net income (loss) before Parliamentary appropriations and restructuring charges | 35      | (96            |  |
| Restructuring and impairment charges  | (5)     | (40)           |  |
| Gain on sale of non-current assets  | 3       |                |  |
| Net income (loss) before Parliamentary appropriations                           | 33      | (136)          |  |

#### Revenue

In 2012—2013, revenue from reactor life extension projects decreased to \$97 million from \$223 million in 2011—2012. This decrease in revenue was largely due to the substantial completion of all major work activities associated with the Bruce Retube Project late in 2011—2012 and the Point Lepreau Nuclear Generating Station in New Brunswick early in this fiscal year. Additionally, the current year's revenue was impacted by Hydro-Québec's termination of its contract with AECL to extend the life of the Gentilly-2 reactor on October 2, 2012. Current year revenue includes adjustments to reflect a reduction in the estimated costs to close out each of its existing life extension contracts.

The reduction in Services revenue is due to the sale of this business to Candu Energy Inc. in the 2011–2012 fiscal year.

#### Gross Margin

In 2012–2013, gross margin for the life extension business improved by \$68 million when compared to 2011–2012. This increase is partially due to a reversal of costs that were previously charged to income and carried on the balance sheet as an accrued contract loss provision. This reversal of costs results from a reduction in the estimated costs to close out certain life extension projects. The variance from 2011–2012 is also due to an adjustment in the 2011–2012 fiscal year to reflect the terms of the subcontract agreement with Candu Energy Inc. to complete AECL's life extension projects.

The reduction in gross margin for the Services business was due to the sale of this business to Candu Energy Inc. in the 2011–2012 fiscal year.

#### Operating Expenses

Operating expenses decreased by \$85 million to \$41 million in 2012–2013 compared to \$126 million in 2011–2012. This variance relates to a decrease in operating expenses resulting from the sale of this business in 2011–2012.

#### Restructuring Charge, Impairment of Assets and Gain on Sale

In 2012—2013 fiscal year, the land and building in Mississauga, Ontario used as AECL's corporate headquarters prior to the sale of the Commercial Operations were sold resulting in a gain on sale of non-current assets of \$2.5 million.

Following the Québec government's decision to permanently shut down the Gentilly–2 nuclear reactor, utility owner Hydro–Québec terminated its contract with AECL to extend the life of the Gentilly–2 reactor. As a result, AECL recorded an impairment charge of \$4.7 million related to non-current assets associated with this contract in the 2012–2013 fiscal year.

As at the closing date of the sale of Commercial Operations on October 2, 2011, 390 AECL employees received termination notices from AECL. As a result, a restructuring provision was recorded for \$36 million which consists mainly of estimated termination benefits for affected employees. This provision was reduced by \$5 million for certain benefits forfeited on termination previously accrued as employee benefits, bringing the restructuring expense recorded in the 2011–2012 fiscal year to \$31 million.

Carrying the assets sold to Candu Energy Inc. at fair value less costs to sell in accordance with accounting standards resulted in an impairment charge of \$9 million in fiscal 2011–2012.

#### Outlook

AECL's Wrap-Up Office will continue to effectively address the Commercial Operations (Discontinued Operations) liabilities to their completion and manage AECL's positive relationship with subcontractor Candu Energy Inc. and AECL's customers.

#### Government of Canada Support

Commercial Operations (Discontinued Operations) will continue to require Government of Canada funding in 2013—2014 to support the management of retained life extension project liabilities and to assert AECL's rights and to defend its position with respect to existing and potential claims for each of these projects.

#### 2013-2014 Priorities and Deliverables

The Wrap-Up Office will focus on the following priorities and deliverables in 2013-2014:

- > Manage the subcontracts with Candu Energy Inc. to complete the existing life extension projects.
- Perform commercial and legal work required to assert AECL's rights and to defend its position with respect to claims and litigation relating to AECL's Commercial Operations (Discontinued Operations) activities.

#### Consolidated Cash Flow and Working Capital

| Actual  | Actual Results                 |  |
|---------|--------------------------------|--|
| 2012-13 | 2011-12                        |  |
| 8       | \$                             |  |
| 46      | 56                             |  |
| (46)    | (40)                           |  |
|         |                                |  |
| _       | 16                             |  |
| 35      | 19                             |  |
| 35      | 35                             |  |
|         | 2012–13<br>\$ 46<br>(46)  — 35 |  |

Overall, AECL's 2012–2013 closing cash position remained consistent with the previous year's balance of \$35 million.

#### **Operating Activities**

Operating activities resulted in a net cash inflow of \$46 million compared to a net inflow of \$56 million in 2011–2012. This variance is mainly due to decreased cash paid to suppliers, partially offset by decreased cash received from customers and Parliamentary appropriations.

#### **Investing Activities**

Investing activities involved a net outlay of \$46 million in 2012–2013 compared to \$40 million in the prior year. This increase in spending relates to renovations and upgrades of several buildings at the Chalk River Laboratories site under the Project New Lease initiative.

#### Off-Balance Sheet Arrangements

In the normal course of business, AECL enters into the following off-balance sheet arrangements:

#### Bank Guarantees and Standby Letters of Credit

These instruments are used in connection with performance guarantees on major contracts. The guarantees generally relate to project and product performance and advance payments. In addition, AECL guarantees that certain projects will be completed within a specified time, and if the Corporation does not fulfil its obligations, it will assume responsibility for liquidated damages. The aggregate amount of AECL's potential exposure through liquidated damages (\$60 million) and guarantees (\$38 million) as at March 2013 was \$98 million (2011–2012: \$210 million). Management has assessed the impact of liquidated damages penalties on the active life extension projects and incorporated it in the calculation of liabilities in the financial statements.

#### Indemnification Arrangements

These arrangements are part of the standard contractual terms to counterparties in transactions such as service agreements, sale and purchase contracts. These indemnification agreements may require AECL to compensate the counterparties for costs incurred as a result of certain events. The nature of these indemnification agreements prevents AECL from making a reasonable estimate of the likely maximum amount to be paid out by the Corporation.

#### Management of Risks and Uncertainties

AECL recognizes risk management as an integral part of sound strategic planning and corporate governance. The Board of Directors is responsible for overseeing the management of risks at AECL. The Chief Executive Officer is accountable to the Board of Directors for all risk management programs. The Corporation's internal and independent auditors report directly to the Audit Committee, in line with best practices. AECL has well-established processes to facilitate wrongdoing disclosure company-wide.



AECL continues to review risk management practices to reflect the current business environment for the Nuclear Laboratories. Existing corporate risk management practices are being enhanced to reflect best practices, including the new international risk management standard (ISO-31000), Treasury Board guidance and company-wide integration. This will result in more frequent re-assessments of risk, better visibility of working level risks at the corporate level, more comprehensive reporting, and improved focus on emerging risks.

AECL has identified several situational risks that will be managed through the effective execution of its program activities and strategic initiatives within an evolving and enhanced Management System framework.

#### **Federal and Provincial Government Policy**

The external political and policy environments in Canada significantly impact AECL. The corporation is affected by federal and provincial policies and decision-making in the areas of nuclear energy and science and technology.

Some relevant risks to AECL include:

- > Ontario's nuclear energy policy decisions with respect to the timing and scale of reactor refurbishments and the construction of new reactors can impact AECL's provision of services and support to the nuclear industry. In a slow-growth scenario, AECL will take steps to support an innovative domestic nuclear supply chain as it accesses other nuclear markets internationally. In an expansionary scenario, AECL will make best efforts to ensure that Ontario has the nuclear facilities and people it relies upon to support the underlying science and technology of the province's nuclear energy program.
- Saskatchewan has shown increased interest in growing provincial capability across the spectrum of small-medium nuclear reactor (SMR) technology, as well as the possible deployment of nuclear power. If Saskatchewan announces a decision to pursue an SMR project, it may require strategies to support new areas of technology, safety, regulation and waste management.
- > In Québec, decisions regarding the future of the Gentilly-2 nuclear power plant have been made. However, a strategy to decommission both Gentilly-1 and Gentilly-2 at the same time has not been established, and could possibly impact the Nuclear Legacy Liabilities Program and test AECL's capacity to respond, in light of significant ongoing decommissioning and waste management programs. Multi-level consultations will be required to plan accordingly.
- > The federal government has indicated that AECL may be required to play a role in providing research and testing to support the CNSC's comprehensive understanding of nuclear safety in order to apply the appropriate regulatory standards. AECL will take steps to explicitly separate the management and execution of CNSC support activities from activities that are distinctly regulated by the CNSC.
- > Should AECL scale back its unique laboratory capabilities, it may no longer be in a position to respond to new science and technology demands that may arise in the years ahead. AECL will seek to sustain funding levels by replacing reduced government funding via full costrecovery from a growing order book, and increase work executed for industry. New opportunities can be funded by rebalancing program spending to support growth in third party revenues.

Throughout the restructuring process, AECL will take steps to sustain the required capabilities that will enable it to address these policyrelated risks, while at the same time retaining the capability to secure emerging opportunities. By doing so, AECL will sustain its value to Canada, and be better positioned to be adaptable, anticipating future demands as the policy environment evolves.

#### **Fukushima Implications**

The earthquake and tsunami that disabled the Fukushima Daiichi nuclear plant in March 2011 highlighted the need for all nuclear facilities to assess their capability to withstand and respond to credible external events, such as earthquakes, and, where necessary, make improvements to their facilities and their emergency response capability.

AECL Nuclear Laboratories had conducted such assessments, and has now started to implement projects to address beyond design basis events for the NRU reactor and the Chalk River site. AECL has also begun to strengthen the documentation for severe accident management and to improve emergency response capabilities for such events.

#### **Retained Liability Claims**

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As a result of past third party relationships, AECL faces potential liability claims. AECL will ensure that it is fully prepared to robustly represent corporate and shareholder interests.

### Isotope Business

As AECL approaches the planned wind-down of Mo-99 production by 2016, volumes and pricing within the Mo-99 market are becoming increasingly difficult to forecast.

AECL is mandated to provide Mo-99 production capability through 2016. To mitigate risks, AECL will continue to optimize internal processes to deliver Mo-99 by improving efficiencies and increasing workforce flexibility. Additionally, AECL will focus on opportunities for new business growth.

### Restructuring Implementation

With the sale of AECL's Commercial Operations business, AECL became a stand-alone federal science and technology organization contributing to economic, security, health and environmental outcomes on behalf of the Government of Canada. AECL addressed logistical challenges to ensure that systems and processes were in place to enable the Nuclear Laboratories to operate successfully, and to prepare for the upcoming phase of restructuring.

As the next phase of AECL restructuring moves forward, there will be challenges that need to be managed. In the meantime, AECL, in support of Natural Resources Canada, has been preparing for transition by developing detailed plans that address the implications and requirements for restructuring.

### People Management

Employee attraction, retention and engagement, along with the reshaping of AECL's workforce through attrition and redeployment, are key people-management challenges expected during restructuring. Workforce planning and talent-management strategies are targeted to ensure that AECL is sufficiently positioned to deal with people management risks. Plans to mitigate risks include the identification of critical positions, key employee retention, succession and knowledge management.

Cultural change and employee engagement initiatives are planned to align with guiding principles of respecting nuclear safety, living within our means, sustaining value and being transition ready. The focus of these initiatives is on reinforcing the trust relationship between AECL, its employees and unions. At the core of AECL's change leadership is a dedication to regular and transparent communications with employees and stakeholders.

### Waste and Decommissioning Liabilities Management

The Nuclear Legacy Liabilities Program has approved funding in place up to March 2014. Program assumptions and estimates for the remaining four years are being updated as part of the planning cycle. AECL will work closely with NRCan to define an optimal program that considers and mitigates potential impacts via reprioritizing projects, engaging the supply chain (contracting), workforce training and other adjustments.

### Health, Safety, Security and Environment (HSSE)

Program execution at AECL requires that a high priority be placed on HSSE matters. HSSE-related activities are wide-ranging and include nuclear and industrial safety, environmental, infrastructure, regulatory compliance, training and leadership, work practices and information technology security.

Active tracking of HSSE indicators provides a measurement of how well systemic risks are being mitigated at AECL sites. AECL will continue to ensure that it has an integrated and robust oversight framework to proactively plan, track and report HSSE-related activities, and to make adjustments according to active risk assessment. HSSE-related activities will be integrated into projects in all program areas, and monitored to ensure that AECL is fully meeting regulatory and legal requirements.

# **Accounting Policy Changes**

### Standards and Interpretations Issued to be Adopted at a Later Date

Certain standards and amendments to the existing standards have been issued by the International Accounting Standards Board and have been assessed as having a possible effect on the Corporation in the future.

The Corporation is currently evaluating the impact of adopting these standards and amendments on its financial statements and intends to adopt these standards when they become effective, as described in Note 4(s) of the Notes to the Consolidated Financial Statements.



# Critical Accounting Estimates and Policies

The Corporation's consolidated financial statements include estimates, assumptions and judgments made by management that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised, if the revision affects only that period, or in the period of the revision and future periods, if the revision affects both current and future periods.

### Revenue Recognition

AECL generates a significant portion of its revenue from long-term contracts. This revenue is recognized using the percentage of completion method, whereby revenue is recorded as related costs are incurred, relative to estimated total contract costs. Refinements of the estimating process for changing conditions and new developments are continuous. Accordingly, revisions in cost and earnings estimates throughout the duration of a contract term are reflected in the period in which the need for revision becomes known. Additionally, losses on long-term contracts are recognized in the period in which they are identified, and are based upon the anticipated excess of contract costs over the related contract revenues. Any such losses are recorded as a component of cost of sales.

### Asset Impairment

AECL reviews its long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be fully recoverable. The recoverable amount of an asset is the greater of its value-in-use and its fair value less costs to sell. In assessing value-in-use, the estimated future cash flows are discounted to their present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

Estimated undiscounted future cash flows reflect management's best estimates and changes in those estimates could materially affect the carrying amount of the long-lived assets. An impairment loss is recognized if the carrying amount of an asset exceeds its estimated recoverable amount. As a result of its review, AECL determined that the carrying amount of certain non-current assets were not recoverable and exceeded fair value. Consequently, these assets were written down as described in Notes 9 and 10 of the Consolidated Financial Statements.

#### Heavy Water Inventory

Heavy water inventory is recorded as a long-term asset as the lead-time required in relation to future reactor sales exceeds one year. A provision has been made for detritiation and upgrading of the inventory.

# **Parliamentary Appropriations**

Parliamentary appropriations that are not in the nature of contributed capital are recorded as funding in the year for which they are appropriated, except as follows:

- > Appropriations restricted by legislation and related to expenses of future periods are deferred and recognized as funding in the period in which the related expenses are incurred.
- Appropriations used for operating activities are recognized as funding in the Consolidated Statement of Comprehensive Income (Loss) as costs are incurred.
- Appropriations used for the purchase of property, plant and equipment are deferred and amortized on the same basis as the related asset. The balance of deferred capital funding, as at March 2013, amounted to \$239 million compared to \$192 million in the previous year.

Commencing in 1996–1997, and pursuant to a 10-year arrangement with the Treasury Board for funding decommissioning activities, AECL retains the net proceeds from the sale or lease of Government of Canada-funded heavy water inventory. This funding arrangement, however, expired on April 1, 2006, and an amount equivalent to the proceeds has been recorded as a payable on AECL's balance sheet.

# Decommissioning and Waste Management

Decommissioning and waste costs are recorded as a long-term liability. The liability is recorded based on the discounted value of the estimated future decommissioning and waste management expenditures to the extent that they can be reasonably estimated. The discounting of the expected future cash flows is at a rate that reflects current market assessments of the time value of money and the risks specific to the provision, with the rate reflecting volatility. The provision is reviewed quarterly to reflect actual expenditures incurred and changes in management's estimate of the future costs and timing thereof.

In the current fiscal year, AECL undertook a comprehensive review of its long-term decommissioning strategy. Consequently, the decommissioning and waste management provision increased to \$7,970 million primarily as a result of the revised estimate, as described in Note 14 of the Consolidated Financial Statements.

# Management's Responsibility

The consolidated financial statements, all other information presented in this Annual Report and the financial reporting process are the responsibility of management. These statements have been prepared in accordance with International Financial Reporting Standards and include estimates based on the experience and judgment of management. Where alternate accounting methods exist, management has chosen those it deems most appropriate in the circumstances.

The Corporation and its subsidiaries maintain books of account, financial and management control, and information systems, together with management practices designed to provide reasonable assurance that reliable and accurate financial information is available on a timely basis, that assets are safeguarded and controlled, that resources are managed economically and efficiently in the attainment of corporate objectives, and that operations are carried out effectively.

These systems and practices are also designed to provide reasonable assurance that transactions are in accordance with Part X of the *Financial Administration Act* (FAA) and its regulations, as well as the *Canada Business Corporations Act*, the articles, and the by-laws and policies of the Corporation and its subsidiaries. The Corporation has met all reporting requirements established by the FAA, including submission of a Corporate Plan, an operating budget, a capital budget and this Annual Report. The Corporation's internal auditor has the responsibility of assessing the management systems and practices of the Corporation and its subsidiaries. AECL's independent auditors conduct an audit of the consolidated financial statements of the Corporation and report on their audit to the Minister of Natural Resources.

The Board of Directors is responsible for ensuring that management fulfils its responsibility. To accomplish this, the Board has two standing committees: Audit and Human Resources & Governance. The Audit Committee, composed of independent directors, has a mandate for overseeing the independent auditors, directing the internal audit function and assessing the adequacy of AECL's business systems, practices and financial reporting. The Audit Committee meets with management, the internal auditor and independent auditors on a regular basis to discuss significant issues and findings, in accordance with their mandate.

The independent auditors and internal auditor have unrestricted access to the Audit Committee, with or without management's presence. The Audit Committee reviews the consolidated financial statements and the Management's Discussion and Analysis report with both management and the independent auditors before they are approved by the Board of Directors and submitted to the Minister of Natural Resources. The Chair of the Audit Committee signs the audited financial statements.

Robert Walker

Mall

President and Chief Executive Officer

July 23, 2013

Steve Halpenny

Chief Financial Officer

Steve Holpern

July 23, 2013

# Independent Auditors' Report

To the Minister of Natural Resources

### Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of Atomic Energy of Canada Limited, which comprise the consolidated balance sheet as at March 31, 2013, and the consolidated statement of comprehensive income (loss), consolidated statement of changes in shareholder's deficit and consolidated cash flow statement for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

### Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### **Opinion**

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Atomic Energy of Canada Limited as at March 31, 2013, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards.

#### Report on Other Legal and Regulatory Requirements

As required by the Financial Administration Act, we report that, in our opinion, the accounting principles in International Financial Reporting Standards have been applied on a basis consistent with that of the preceding year.

Further, in our opinion, the transactions of Atomic Energy of Canada Limited and its wholly-owned subsidiaries that have come to our notice during our audit of the consolidated financial statements have, in all significant respects, been in accordance with Part X of the Financial Administration Act and regulations, the Canada Business Corporations Act and regulations and the articles and by-laws of Atomic Energy of Canada Limited and its wholly-owned subsidiaries.

Clyde MacLellan, FCPA, FCA

Assistant Auditor General

for the Auditor General of Canada

July 23, 2013

Ottawa, Canada

LPMG LLP

Chartered Accountants, Licensed Public Accountants

July 23, 2013

Toronto, Canada

# Consolidated Balance Sheet

As at March 31

| (thousands of Canadian dollars)                                   | Notes | 2013        | 2012        |
|---|-------|-------------|-------------|
| A   |       | \$          |             |
| Assets  |       |             |             |
| Current   |       | CO 100      |             |
| Cash  | 2.2   | 35,461      | 35,439      |
| Trade and other receivables                                       | 5,27  | 330,143     | 338,121     |
| Current portion of long-term receivables                          | 7     | 22,566      | 21,319      |
| Inventory   | 6     | 26,150      | 29,179      |
|   |       | 414,320     | 424,058     |
| Long-term receivables   | 7     | 105,031     | 127,964     |
| Investments held in trust   | 8     | 42,477      | 39,305      |
| Heavy water inventory   | 6     | 290,107     | 290,599     |
| Property, plant and equipment                                     | 9,27  | 286,371     | 263,277     |
| Intangible assets   | 10    | 1,511       | 1,693       |
|   |       | 1,139,817   | 1,146,896   |
| Liabilities   |       |             |             |
| Current   |       |             |             |
| Trade and other payables  | 11,27 | 141,281     | 158,426     |
| Customer advances and obligations                                 | 12,27 | 167,774     | 316,601     |
| Provisions  | 13,27 | 74,409      | 121,500     |
| Current portion of decommissioning and waste management provision | 14    | 205,000     | 135,500     |
| Current portion of long-term payables                             | 17    | _           | 6,660       |
| Restructuring provision   | 27    | 3,873       | 6,026       |
|   |       | 592,337     | 744,713     |
| Decommissioning and waste management provision                    | 14    | 7,765,040   | 5,543,030   |
| Deferred capital funding  | 15    | 238,860     | 192,314     |
| Deferred decommissioning and waste management funding             | 19    | 171,508     | 147,007     |
| Employee benefits   | 16    | 27,975      | 53,860      |
|   |       | 8,795,720   | 6,680,924   |
| Shareholder's deficit   |       |             |             |
| Share capital   | 26    | 15,000      | 15,000      |
| Contributed capital   | 19    | 264,071     | 291,867     |
| Deficit   |       | (7,934,974) | (5,840,895) |
|   |       | (7,655,903) | (5,534,028) |
|   |       | 1,139,817   | 1,146,896   |

The accompanying notes are an integral part of these consolidated financial statements

Approved on behalf of the Board:

Barbara Trenholm, Director

Robert Walker, Director

# Consolidated Statement of Comprehensive Income (Loss)

For the year ended March 31

| (thousands of Canadian dollars)   | Notes | 2013             | 2012             |
|---|-------|------------------|------------------|
|   |       | \$               | \$               |
| Nuclear Laboratories  | 20    | 00 701           | 77. 220          |
| Revenue<br>Cost of sales  | 20    | 86,781<br>48,819 | 76,220<br>43,329 |
|   |       |                  |                  |
| Gross margin before funding Funding                                     | 21    | 37,962 $45,097$  | 32,891<br>28,212 |
|   | 21    |                  |                  |
| Gross margin  |       | 83,059           | 61,103           |
| Operating expenses  |       | 415,893          | 381,253          |
| Operating loss  |       | (332,834)        | (320,150)        |
| Financial income  | 23    | 8,436            | 9,763            |
| Financial expenses  | 23    | 79               | 552              |
| Net loss before decommissioning and waste management                    |       |                  |                  |
| and Parliamentary appropriations  |       | (324,477)        | (310,939)        |
| Decommissioning and waste management                                    |       |                  |                  |
| Funding   | 21    | 132,685          | 136,693          |
| Revaluation loss on decommissioning and waste management provision      |       |                  |                  |
| and other   | 14    | 2,282,376        | 1,368,051        |
| Decommissioning and waste management loss before                        |       |                  |                  |
| financial expenses  |       | (2,149,691)      | (1,231,358)      |
| Financial expenses  | 23    | 144,194          | 149,378          |
| Decommissioning and waste management net loss before                    |       |                  |                  |
| Parliamentary appropriations  |       | (2,293,885)      | (1,380,736)      |
| Net loss from continuing operations before Parliamentary appropriations |       |                  |                  |
| and discontinued operations   |       | (2,618,362)      | (1,691,675)      |
| Discontinued Operations (Note 27)                                       |       |                  |                  |
| Restructuring charge  | 27    | _                | (31,474)         |
| Impairment of non-current assets  | 9,10  | (4,702)          | (8,587)          |
| Operating income (loss) from discontinued operations                    | 27    | 35,132           | (95,854)         |
| Gain on sale of non-current assets                                      | 27    | 2,472            |                  |
| Income (loss) from discontinued operations                              |       | 32,902           | (135,915)        |
| Loss before Parliamentary appropriations                                |       | (2,585,460)      | (1,827,590)      |
| Parliamentary appropriations  | 21    | 492,362          | 673,603          |
| Other comprehensive income (loss)                                       |       |                  |                  |
| Other employee benefit plan actuarial (loss) gains                      |       | (981)            | 2,076            |
| Other comprehensive (loss) income                                       |       | (981)            | 2,076            |
| Total comprehensive loss  |       | (2,094,079)      | (1,151,911)      |

The accompanying notes are an integral part of these consolidated financial statements



# Consolidated Statement of Changes in Shareholder's Deficit

For the year ended March 31

| (thousands of Canadian dollars)                   | Notes | Share<br>Capital | Contributed<br>Capital | Deficit     | Total<br>Shareholder's<br>Deficit |
|---|-------|------------------|------------------------|-------------|-----------------------------------|
|   |       | \$               | \$                     | \$          | \$                                |
| Balance at March 31, 2011                         |       | 15,000           | 325,533                | (4,688,984) | (4,348,451)                       |
| Net loss attributable to Shareholder for the year |       |                  | _                      | (1,153,987) | (1,153,987)                       |
| Other comprehensive income (loss)                 |       | _                | _                      | 2,076       | 2,076                             |
| Total comprehensive loss                          |       | _                | _                      | (1,151,911) | (1,151,911)                       |
| Transfer to deferred decommissioning and          |       |                  |                        |             |                                   |
| waste management funding                          | 19    | _                | (24,501)               | AMERICA     | (24,501)                          |
| Payable to Shareholder                            |       | -                | (7,734)                | -           | (7,734)                           |
| Transfer to repayable contributions               | 19    |                  | (1,431)                | _           | (1,431)                           |
| Balance at March 31, 2012                         |       | 15,000           | 291,867                | (5,840,895) | (5,534,028)                       |
| Net loss attributable to Shareholder for the year |       | _                | _                      | (2,093,098) | (2,093,098)                       |
| Other comprehensive income (loss)                 |       |                  |                        | (981)       | (981)                             |
| Total comprehensive loss                          |       | -                | _                      | (2,094,079) | (2,094,079)                       |
| Transfer to deferred decommissioning and          |       |                  |                        |             |                                   |
| waste management funding                          | 19    |                  | (24,501)               | _           | (24,501)                          |
| Transfer to repayable contributions               | 19    | _                | (3,295)                |             | (3,295)                           |
| Balance at March 31, 2013                         |       | 15,000           | 264,071                | (7,934,974) | (7,655,903)                       |

The accompanying notes are an integral part of these consolidated financial statements

# Consolidated Cash Flow Statement

For the year ended March 31

| (thousands of Canadian dollars)   | 2013      | 2012      |
|---|-----------|-----------|
|   | \$        | \$        |
| Operating activities  |           |           |
| Cash receipts from customers  | 104,455   | 227,086   |
| Cash receipts from Parliamentary appropriations                           | 551,845   | 719,030   |
| Cash receipts for decommissioning and waste management activities         | 134,436   | 128,997   |
| Cash paid to suppliers and employees                                      | (605,246) | (882,503) |
| Cash paid for decommissioning activities                                  | (132,610) | (136,578) |
| Payment of proceeds on disposal of discontinued operations to Shareholder | (7,734)   | -         |
| Interest received on investments (net)                                    | 603       | 589       |
| Interest and bank charges paid  | (43)      | (46)      |
| Cash from operating activities  | 45,706    | 56,575    |
| Thereof from discontinued operations                                      | (3,446)   | 19,136    |
| Investing activities  |           |           |
| Proceeds on disposal of discontinued operations                           | 6,134     | 1,600     |
| Proceeds on sale of non-current assets                                    | 3,250     | -         |
| Acquisition of property, plant and equipment and intangible assets        | (55,068)  | (41,299   |
| Cash used in investing activities   | (45,684)  | (39,699)  |
| Thereof from discontinued operations                                      | 9,384     | (1,798    |
| Cash  |           |           |
| Increase  | 22        | 16,876    |
| Balance at beginning of the year  | 35,439    | 18,563    |
| Balance at end of the year  | 35,461    | 35,439    |

The accompanying notes are an integral part of these consolidated financial statements

# Notes to the Consolidated Financial Statements

For the year ended March 31, 2013

# 1. The Corporation

Atomic Energy of Canada Limited (AECL or the Corporation) was incorporated in 1952 under the provisions of the *Canada Corporations Act* (and continued in 1977 under the provisions of the *Canada Business Corporations Act*), pursuant to the authority and powers of the Minister of Natural Resources under the *Nuclear Energy Act*.

The Corporation is a Schedule III Part I Crown corporation under the *Financial Administration Act* and an agent of Her Majesty in Right of Canada. As a result, AECL's liabilities are ultimately liabilities of Her Majesty in Right of Canada. The Corporation receives funding from the Government of Canada and is exempt from income taxes in Canada.

AECL conducts its business through the Nuclear Laboratories and the Wrap-Up Office, which manages the retained liabilities associated with AECL's Commercial Operations (Discontinued Operations) sold on October 2, 2011. These organizations aid in resource allocation decisions and assess operational and financial performance. Nuclear Laboratories includes the management of the Decommissioning and Waste Management liability on behalf of the Government of Canada. AECL is domiciled in Canada and its address is Chalk River Laboratories, Chalk River, Ontario, KOJ 1JO.

These consolidated financial statements were approved and authorized for issue by the Corporation's Board of Directors on July 23, 2013.

# 2. Restructuring and Corporate Plan

The Government of Canada completed the first phase of its restructuring plan for AECL in 2011–2012 with the sale of the Corporation's Commercial Operations business to Candu Energy Inc., a wholly-owned subsidiary of SNC-Lavalin. The restructuring of AECL has resulted in the presentation of its Commercial Operations as discontinued operations (Note 27).

In February 2012, the Government of Canada formally launched the second phase of its AECL restructuring plan, issuing a Request for Expression of Interest (REOI) to understand potential opportunities for partnership models in relation to the Nuclear Laboratories and the relevant experience and capabilities offered by respondents. This process has allowed the Government to benefit from the experiences of domestic and international organizations involved in the management or restructuring of nuclear science and technology organizations.

In February 2013, the Government of Canada announced its intention to contract with the private sector for the management of AECL based on a Government-owned Contractor-operated model, known as a GoCo. Under this model, AECL's activities will be focused on managing its radioactive waste and decommissioning responsibilities, performing science and technology activities to meet core federal obligations, and supporting Canada's nuclear industry on a commercial basis.

The services of a nuclear advisor and a financial advisor are being sought by Natural Resources Canada to help guide the decision-making as the restructuring process moves ahead in the coming year. Ultimate selection of the Contractor is at the sole discretion of the Shareholder.

The Corporation submitted its 2013–2014 to 2017–2018 Corporate Plan to the Government of Canada prior to fiscal year-end. On May 23, 2013, subsequent to year-end, Governor in Council approval was obtained for the 2013–2014 period. The Corporate Plan is aligned with the restructuring direction provided by the Shareholder and these financial statements have been prepared without making any assumptions as to the final outcomes of the second phase of the restructuring. As such, they do not contemplate any changes to AECL's existing activities.

# 3. Basis of Preparation

### a) Statement of Compliance

The consolidated financial statements of the Corporation have been prepared by management in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board using accounting policies described herein.

### b) Basis of Measurement

The Corporation's financial statements have been prepared on the historical cost basis, with the exception of certain financial instruments, which are measured at fair value, and Employee benefits and the Decommissioning and waste management provision, which are measured based on the discounted value of expected future cashflows.

These consolidated financial statements are presented in Canadian dollars, which is the Corporation's functional currency. All financial information presented in Canadian dollars has been rounded to the nearest thousands, except where otherwise indicated.

### c) Critical Accounting Estimates, Assumptions and Judgments

The preparation of financial statements requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the Corporation's accounting policies.

The Corporation's consolidated financial statements include estimates, assumptions and judgments made by management that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised, if the revision affects only that period, or in the period of the revision and future periods, if the revision affects both current and future periods.

The following are significant management judgments in applying the accounting policies of the Corporation that have the most significant effect on the financial statements.

### i. Impairment of Property, Plant and Equipment and Intangible Assets

A cash-generating unit (CGU) is the smallest identifiable group of assets generating cash inflows that are largely independent of the cash inflows from the Corporation's other assets or group of assets. For the purposes of testing impairment of long-lived assets, Management has determined that there are two CGUs, one for Commercial Operations (Discontinued Operations) and the other for Nuclear Laboratories (Notes 4(h), 9 and 10).

### ii. Research and Development

Management monitors the progress of internal research and development projects in order to determine if the projects are in the research or development phases. In addition to detailed analysis of these costs, management judgment is required in order to determine if and when the requirements for capitalization of development costs are met.

Assumptions and estimation uncertainties that have the most significant effect on the amounts reported in the financial statements are discussed below.

### iii. Decommissioning and Waste Management Provision

The Decommissioning and waste management provision is recorded based on the discounted value of the estimated future decommissioning and waste management expenditures to the extent that they can be reasonably estimated. Estimated future decommissioning and waste management costs require that assumptions be made about the regulatory environment, health and safety considerations, the desired end state, technology to be employed and, in some cases, research and development activities that extend well into the future.

Significant assumptions determine the valuation, such as timing of major decommissioning and remediation project expenditures, regulatory requirements, volumes of waste, interest rate estimates, inflation factors, the impact of technological advances and the health, safety, security and environmental protection objectives that are in accordance with Canadian Nuclear Safety Commission (CNSC) regulations.

Changes to these assumptions, as well as changes to the timing of the programs or the technology employed, or changes in the standards and regulations governing the decommissioning of nuclear facilities could result in material changes to the Decommissioning and waste management provision (Note 14). Also, changes to the discount rate used to estimate the liability can have a material impact on the reported financial results.

### iv. Revenue Recognition – Life Extension Projects (Discontinued Operations – Note 27)

Assumptions and estimates impacting revenue recognition are required for AECL's fixed-price CANDU life extension contracts. The accuracy of the Corporation's revenue in Discontinued Operations and Consolidated Statement of Comprehensive Income (Loss) in a given period is largely dependent on the accuracy of its estimates of the cost to complete each of these projects.

There are a number of factors that can contribute to changes in estimates of contract cost and profitability. The most significant of these include the completeness and accuracy of the original bid, costs associated with scope changes, complex technical issues arising from the nature of these first-of-a-kind projects, subcontractor performance issues, changes in productivity expectations, site conditions that differ from those assumed in the original bid (to the extent contract remedies are unavailable) and the availability and skill level of workers in the geographic location of the project.

Incorporated in the Corporation's forecast for Discontinued Operations are the best estimates of the financial impact of these project uncertainties prior to their resolution, which may vary materially from the actual amounts realized. Substantial changes in cost estimates, particularly in these larger, more complex projects have had, and can in future periods have, a material effect on the Corporation's Consolidated Statement of Comprehensive Income (Loss) (Notes 4(n), 20).

### v. Property, Plant and Equipment and Intangible Assets

Property, plant and equipment, and intangible assets are reviewed for impairment and estimated useful life whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. If indicators show that the carrying amount of an asset is less than its recoverable amount, then a formal estimation of the asset's recoverable amount is performed. For intangible assets with an indefinite useful life, this assessment is performed at each reporting date.

An asset's recoverable amount is based on an estimate of the higher of fair value less costs to sell and value-in-use, which, in turn, is determined using discounted future cash flows. Where it is not possible to estimate the recoverable amount of an individual asset, the recoverable amount is estimated for the CGU to which the asset belongs. The accounting estimate related to asset impairment is susceptible to change from period to period because it requires management to make assumptions about future events and the impact of recognizing an impairment could have a material impact on the Corporation's consolidated financial statements (Notes 4(h), 9, 10).

Assets or disposal groups held for sale are measured at the lower of carrying value and the fair value less selling costs. Assets are not amortized from the time when they are classified as held for sale. Impairment losses from the initial classification as held for sale and gains or losses from subsequent measurement at the lower of carrying value and fair value less selling costs are recognized in the Consolidated Statement of Comprehensive Income (Loss). Gains are not recognized in excess of any cumulative losses.

### vi. Heavy Water Inventory

Heavy water inventory is recorded at the lower of weighted average cost and net realizable value. Net realizable value includes the estimated cost of detritiation and upgrading of inventory and is based on Management's best estimate of future events and, accordingly, actual net realizable value could differ from these estimates (Note 6).

#### vii. Employee Benefits

The cost of non-pension employee benefits earned by employees is determined using the Projected Unit Credit method prorated on length of service and Management's best estimate of salary escalation, retirement ages of employees and expected employee departure date. The Corporation takes advice from independent actuaries regarding the appropriateness of the assumptions. Changes in the assumptions used may have a significant impact on the Corporation's consolidated financial statements (Note 16).

#### viii. Restructuring Cost

The restructuring cost, related to Discontinued Operations, is based on Management's best estimate of the total costs to be incurred relating to the termination of employees, and accordingly, actual costs could differ from these estimates.

# ix. Provisions and Contingencies

The Corporation is exposed to contingent losses in the ordinary course of business. Prediction of the outcome of contingencies, determination of whether accrual or disclosure in the consolidated financial statements is required and estimation of potential financial effects are matters for judgment. In determining a reliable estimate of an obligation, Management makes assumptions about the amount, likelihood of outflows, timing of outflows and discount rates.

Factors affecting these assumptions include the nature of the provision, the existence of a claim amount, the opinion or views of legal counsel and other advisers, and any decision of Management as to how AECL intends to handle the obligation. The actual amount and timing of outflows may deviate from the assumptions, and the difference might materially affect future financial statements, with an adverse impact upon the consolidated results of operation, financial position and liquidity (Notes 13, 18(d)).

# 4. Significant Accounting Policies

The accounting policies set out below have been applied consistently to all periods presented in these consolidated financial statements.

### a) Basis of Consolidation

### i. Subsidiaries

Subsidiaries are entities controlled by the Corporation. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases. The accounting policies of subsidiaries have been changed when necessary to align them with the policies of the Corporation.

These consolidated financial statements include the accounts of the Corporation's wholly-owned subsidiaries, AECL Technologies Inc., incorporated in the state of Delaware, U.S.A. in 1988, AECL Technologies B.V., incorporated in the Netherlands in 1995, and its interest in AECL's Nuclear Fuel Waste Act Trust Fund ("Trust Fund"), a special purpose entity (Note 4 (d)). All inter-company transactions have been eliminated upon consolidation.

# ii. Special Purpose Entities

A special purpose entity (SPE) is created to accomplish a narrow and well-defined objective, often with legal arrangements that impose strict limits on the decision-making powers of the SPE's managers. The sponsor of a SPE may control the SPE by virtue of receiving the majority of the benefits related to the SPE's operations and net assets, being exposed to the majority of risks incident to the SPE's activities and retaining the majority of the residual or ownership risks related to the SPE or its assets, even though it may own little or none of the SPE's equity.

The Corporation has examined its business arrangements and has concluded that there is no significant interest in SPEs with the exception of the Trust Fund, which has been consolidated.

### b) Foreign Currency Translation

Iransactions denominated in a foreign currency are translated into Canadian dollars at the exchange rate in effect at the date of the transaction. Monetary assets and liabilities, not denominated in the functional currency of the Corporation, outstanding at the balance sheet date are adjusted to reflect the exchange rate in effect at that date. Exchange gains and losses arising from the translation of foreign currencies are included in the Consolidated Statement of Comprehensive Income (Loss).

### c) Financial Instruments

# Recognition and Measurement

The following table presents the classification of AECL's financial instruments into various categories:

| Category  | Financial Instruments               |  |
|---|-------------------------------------|--|
| Financial assets and financial liabilities at fair value through profit or loss | > Investments held in trust         |  |
| Loans and receivables   | > (ash                              |  |
|   | Irade and other receivables         |  |
|   | > Long-term receivables             |  |
| Held-to-maturity  | > None                              |  |
| Available-for-sale financial assets   | > None                              |  |
| Other financial liabilities   | > Irade and other payables          |  |
|   | > Provisions                        |  |
|   | > Customer advances and obligations |  |
|   | > Long term payables                |  |

Financial instruments are recognized initially at fair value. Financial instruments classified as loans and receivables are subsequently measured at amortized cost using the effective interest method.

Financial assets and financial liabilities at fair value through profit or loss are initially and subsequently recorded at fair value at the Balance Sheet date based on similar instruments with quoted market prices. Gains and losses arising from changes in fair value are recognized as Financial income or Financial expenses in Comprehensive Income (Loss) for the period in which they occur. Transaction costs for financial assets and financial liabilities at fair value through profit or loss are expensed as incurred. The investments held in trust are designated as assets at fair value through profit or loss, as the Fund Manager is permitted to trade within the approved investment guidelines to generate adequate returns.

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market and do not qualify as trading assets.

Other financial liabilities are initially recognized at fair value and are subsequently carried at amortized cost using the effective interest method.

#### Impairment

Loans and receivables are assessed at each reporting date to determine whether there is objective evidence of impairment. Objective evidence of impairment can include default or delinquency by a debtor, indications that a debtor will enter bankruptcy, etc. A financial asset is impaired if objective evidence indicates that a loss event has occurred after the initial recognition of the asset and the loss event has had a negative effect on estimated future cash flows of the asset which are reliably measurable.

The Corporation assesses all individually significant receivables for specific impairment. All individually significant receivables found not to be specifically impaired are then collectively assessed for impairment. Receivables that are not individually significant are collectively assessed for impairment by grouping together receivables with similar risk characteristics. An impairment loss is recognized immediately in the Consolidated Statement of Comprehensive Income (Loss) when there is objective evidence of impairment. With a recovery in value, impairment losses on financial assets are reversed through the Consolidated Statement of Comprehensive Income (Loss).

### d) Investments Held in Trust - Trust Fund

The Trust Fund is a SPE established pursuant to the *Nuclear Fuel Waste Act* to finance the implementation of an approach for the long-term management of nuclear fuel waste. While the Corporation does not have any direct or indirect shareholdings in this entity, AECL Management has determined that the Corporation, in substance, controls the Trust Fund.

Long-term investments held in trust are measured at fair value. Interest earned is included in Financial income in the Consolidated Statement of Comprehensive Income (Loss).

## e) Inventory

Heavy water, spare parts and store supplies and reactor fuel are measured at the lower of weighted average cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses. When the circumstances that previously caused inventory to be written down no longer exist or when there is clear evidence of an increase in net realizable value because of changed circumstances, the amount of the original write-down is reversed. Reactor fuel inventory costs include an allocation of overhead.

### f) Property, Plant and Equipment

Property, plant and equipment are recorded at cost less accumulated depreciation and accumulated impairment losses. Costs comprise expenditures that are directly attributable to the acquisition of the asset, including costs incurred to bring the assets to a working condition for their intended use, and the costs of dismantling and removing the items and restoring the site on which they are located.

Major parts of property, plant and equipment that have different useful lives are accounted for as separate items or components of property, plant and equipment.

The cost of major overhauls, inspections and replacement parts of an item of property, plant and equipment are recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within these costs will flow to the Corporation, and the cost can be measured reliably. Upon the replacement of parts of existing property, plant and equipment, the carrying amount of the replaced part

is derecognized. Decommissioning and waste management costs are included as part of the related assets. The costs of the day-to-day servicing of property, plant and equipment are recognized in the Consolidated Statement of Comprehensive Income (Loss) as incurred.

Construction in progress is not depreciated until the constructed asset is ready for use. When complete, the constructed asset is transferred to the appropriate category of property, plant and equipment and depreciated at the rate applicable to that category.

Depreciation is calculated over the depreciable amount of an item of property, plant and equipment, which is the item's cost, less its residual value. Depreciation is provided on a straight-line basis over the estimated useful life of the asset, and on a usage basis for certain machinery and equipment used in commercial projects, as follows:

Land improvements 10 to 20 years Buildings and reactors 20 to 40 years Machinery and equipment 3 to 20 years

Depreciation methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

## g) Intangible Assets and Research and Development Activities

Expenditures on research activities are expensed as incurred.

Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Corporation has or intends to have sufficient resources to complete development and to use or sell the asset.

The expenditures capitalized include the cost of materials, direct labour and overhead costs that are directly attributable to preparing the asset for its intended use.

Capitalized development costs are measured at cost less accumulated amortization and accumulated impairment losses. Subsequent expenditures are capitalized only when they increase the future economic benefits embodied in the specific asset to which they relate.

Research and development costs incurred to discharge long-term waste management and decommissioning obligations for which specific provisions have already been made are charged against the related provision.

Other intangible assets that are acquired by the Corporation and have finite useful lives are measured at cost less accumulated amortization and accumulated impairment losses.

Amortization is calculated over the cost of the asset, less its residual value. Amortization is provided on a straight-line basis over the estimated useful life of the asset, from the date it is available for use, as follows:

Software costs

# h) Impairment of Property, Plant and Equipment and Intangible Assets

The carrying values of non-financial assets with finite lives, such as property, plant and equipment and intangible assets are assessed for impairment whenever events or changes in circumstances indicate that the carrying amounts of such assets may not be fully recoverable. For intangible assets with indefinite lives and intangibles not yet available for use, a calculation of recoverable amount is performed at each reporting date and whenever events or changes in circumstances indicate that the carrying amounts may not be fully recoverable.

The recoverable amount of an asset or CGU is the greater of its value-in-use and its fair value less costs to sell. In assessing value-in-use, the estimated future cash flows are discounted to their present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or CGUs.

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses recognized in respect of CGUs are allocated to reduce the carrying amounts of the assets in the unit on a pro rata basis. Impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists.

An impairment loss is reversed if there has been a change in the estimate used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

### i) Trade and Other Receivables, Customer Advances and Obligations

Certain construction contracts may have revenue recognized in excess of billings (unbilled revenues) and other construction contracts may have billings in excess of revenue recognized (Customer advances and obligations). Unbilled revenues are recorded as an asset and included in Trade and other receivables. Billings collected in excess of revenue recognized on contracts and advances for which the related work has not started are recognized as Customer advances in accordance with the Corporation's revenue recognition policy.

### j) Decommissioning and Waste Management Provision

AECL provides for its obligation to decommission nuclear facilities and to manage nuclear waste in order to satisfy regulatory requirements. The best estimate of the obligation is recognized in the period in which a reliable estimate can be determined and it is probable that an outflow of economic benefits will be required to settle the obligation.

The provision takes into account current technological, environmental and regulatory requirements and is determined by discounting the expected future cash flows at a rate that reflects current market assessments of the time value of money and the risks specific to the provision. The estimated future cash forecasts are adjusted for inflation using a rate that is derived on the basis of Consensus forecasts and Bank of Canada historical and target inflation rates.

As the provision is recorded based on a discounted value of the projected future cash flows, it is increased quarterly to reflect the passage of time by removing one quarter's discount. The unwinding of the discount is charged to Financial expenses in the Consolidated Statement of Comprehensive Income (Loss).

The provision is reduced by actual expenditures incurred. The cost estimate is subject to periodic review and any material changes in the estimated amount or timing of the underlying future cash flows are recorded as an adjustment to the provision. Upon settlement of the liability, a gain or loss will be recorded. The provision includes future construction costs associated with certain enabling facilities, such as disposal facilities for nuclear waste.

Decommissioning costs of new assets are added to the carrying amount and depreciated over the related assets' useful lives. The effect of subsequent changes in estimating an obligation for which the provision was recognized as part of the cost of the asset is adjusted against the asset.

### k) Provisions and Contingent Liabilities

A provision is recognized if, as a result of a past event, the Corporation has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognized as a financial expense.

All provisions are reviewed at each reporting date and adjusted to reflect the current best estimate of the consideration required to settle the obligation.

In those cases in which the possible outflow of economic resources as a result of present obligations is considered improbable or the amount of the obligation cannot be measured reliably, no liability is recognized.

### 1) Pension Plan

Substantially all of the employees of the Corporation are covered by the Public Service Pension Plan (the "Plan"), a contributory defined benefit plan established through legislation and sponsored by the Government of Canada. Contributions are required by both the employees and the Corporation to cover current service cost.

Pursuant to legislation currently in place, the Corporation has no legal or constructive obligation to pay further contributions with respect to any past service or funding deficiencies of the Plan. Consequently, contributions are recognized as an expense in the year when employees have rendered service and represent the total pension obligation of the Corporation.

### m) Employee Benefits

The Corporation provides employee benefits such as voluntary termination compensation benefits and other benefits, including continuation of benefits coverage for employees on long-term disability, post-retirement life insurance, health and dental benefits during long-term disability and self-insured workers' compensation.

The Corporation reimburses Human Resources and Social Development Canada for workers' compensation claims in accordance with the *Government Employees Compensation Act* for current payments billed by the provincial compensation boards.

### i. Non-Pension Post-Employment Benefit Plans

The Corporation's net obligation with respect to its non-pension post-employment defined benefit plans is the amount of future benefit that employees have earned in return for their service in the current and prior periods. That benefit is discounted to determine its present value. The calculation is performed annually by a qualified actuary using the Projected Unit Credit Method prorated on service and Management's best estimate of salary escalation, retirement ages of employees, mortality and expected employee turnover.

The discount rate is based on the methodology recommended by the Canadian Institute of Actuaries. The Corporation recognizes any actuarial gains and losses arising from non-pension defined benefit plans immediately in Other comprehensive income (loss) in the period in which they arise, and reports them in Deficit.

### ii. Other Long-Term Employee Benefits

The Corporation's net obligation with respect to other long-term employee benefits is the amount of future benefit that employees have earned in return for their service in the current and prior periods. These benefits include self-insured workers' compensation benefits, health and dental care benefits during long-term disability and long-term service awards.

That benefit is discounted to determine its present value. The discount rate is based on the methodology recommended by the Canadian Institute of Actuaries. The calculation is performed using a combination of the Projected Unit Credit Method prorated on service and event-driven calculations for Workers' Compensation. Any actuarial gains and losses are recognized in the Consolidated Statement of Comprehensive Income (Loss) in the period in which they arise.

### iii. Short-Term Employee Benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided. A liability is recognized for the amount expected to be paid under short-term cash bonus plans if the Corporation has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee, and if the obligation can be estimated reliably.

### n) Revenue Recognition

Revenue is derived from sales of the Corporation's services and products to clients. Revenue is measured at the fair value of the consideration received or receivable, net of trade discounts, volume rebates and amounts collected for third parties, such as value added, excise and sales taxes.

Revenue is recognized when it can be measured reliably and when it is probable that the economic benefits associated with the transaction will flow to AECL. When there is uncertainty as to ultimate collection, revenue is recognized as cash is received.

When a single transaction requires the delivery of more than one product or service (multiple components), the revenue recognition criteria noted below are applied to the separately identifiable components. A component is considered to be separately identifiable if the product or service delivered has stand-alone value to that customer and the fair value associated with the product or service can be measured reliably. The amount recognized as revenue for each component is the fair value of the element in relation to the fair value of the arrangement as a whole.

### Long-Term Contracts related to Discontinued Operations

Contract revenue includes the initial amount agreed in the contract plus any variations in the contract value, claims and incentive payments, to the extent that they can be measured reliably and it is probable that they will be received. When adjustments in contract value or estimated costs will result in a change in revenue and these adjustments are probable and can be reliably measured, any changes from the prior estimates are reflected in the Consolidated Statement of Comprehensive Income (Loss) in the current period.



When the outcome of a long-term contract can be estimated reliably, revenue is recognized under the percentage-of-completion method using the ratio of costs incurred to total estimated costs as the measure of performance. This measure of progress is then applied to the related anticipated revenue, resulting in recognizing revenue proportionately with the stage of completion.

When the outcome of a long-term contract cannot be estimated reliably, revenue is recognized only to the extent that contract costs incurred are expected to be recoverable. When the uncertainties that prevented the outcome of a contract are subsequently resolved, then revenue is recognized under the percentage-of-completion method. Expected losses on long-term contracts are recognized in Comprehensive Income (Loss) when identified.

Penalties, including penalties for late delivery, are recorded as a reduction of total contract revenue in the period in which the determination is made. Amounts for claims against customers are recognized when they can be reliably measured and realization is probable.

#### Cost-Reimbursement Construction Contracts

Revenue under cost-reimbursement construction contracts is recognized as reimbursable costs are incurred and includes an estimate of fees earned.

#### Other Service Contracts

When services are performed over a specified period of time, revenue is recognized on a straight-line basis unless there is evidence that some other method better represents the stage of completion. For waste management services, revenue is recognized based on the contractual arrangements specified in a contract for disposal with the customer.

#### Supply of Product

Revenue is recognized when the risks and rewards of ownership have been transferred to the customer, which generally coincides with the transfer of title. When goods require significant tailoring, modification or integration, the revenue is recognized using the percentage-of-completion method as described above.

# Royalty Revenue

Revenue from licensing of intellectual property is recorded as revenue in accordance with the terms of the specific agreement. These arrangements entitle AECL to receive payment from the sale to the licensee of CANDU and CANDU-related technologies for future new build, life extension and other projects.

### o) Parliamentary Appropriations

Parliamentary appropriations that are not in the nature of contributed capital are accounted for as Government of Canada grants and recognized as funding in the period in which they are appropriated or when entitlement is otherwise established by the end of an accounting period by Government authorization and meeting eligibility criteria. Appropriations related to expenses of future periods are deferred and recognized as funding in the period in which the related expenses are incurred.

Appropriations restricted by legislation and related to expenses of future periods are deferred and recognized as funding in the period in which the related expenses are incurred; and appropriations used for the depreciable property, plant and equipment or finite lived intangible assets are recorded as deferred capital funding and amortized on the same basis as the related assets.

From 1997 to 2006, and pursuant to the 10-year arrangement for funding decommissioning activities, the Corporation retained cash proceeds from the sale or lease of the portion of heavy water inventory that was funded by the Government of Canada. The cash proceeds were transferred from contributed capital to deferred decommissioning funding and were then recorded as funding in Net income (loss) as the related expenditures were incurred. Proceeds from sales made during the 10-year arrangement that are received after April 1, 2006 are transferred from Contributed capital to Deferred decommissioning and waste management funding.

#### p) Other Funding

Amounts received from other government entities for execution of work performed on service contract agreements and invoiced in a manner similar to other commercial customers are classified as Other funding.

### q) Cost Recovery from Third Parties

AECL operates the Low-Level Radioactive Waste Management Office and Port Hope Area Initiative Management Office through Nuclear Laboratories on a cost-recovery arrangement with Natural Resources Canada. Costs recovered under these arrangements are recorded as cost recovery from third parties and are recognized as the related expenses are incurred and included as Funding in Comprehensive Income (Loss).

## r) Financial Income and Financial Expense

Financial income is comprised of interest income on funds invested and long-term receivables. Interest income is recognized in Comprehensive Income (Loss) as it accrues using the effective interest method.

Financial expenses are comprised of interest expense on long-term payables and the unwinding of the discount on provisions and long-term payables.

# s) Standards and Interpretations Issued to be Adopted at a Later Date

The following standards and amendments to the existing standards have been issued by the International Accounting Standards Board and have been assessed as having a possible effect on the Corporation in the future:

- > IFRS 9, Financial Instruments, covers the classification and measurement of financial assets and financial liabilities and requires mandatory implementation for annual periods beginning on or after January 1, 2015 with earlier application permitted.
- > IFRS 10, Consolidated Financial Statements, ("IFRS 10") and IFRS 12, Disclosure of Interests in Other Entities, ("IFRS 12"). IFRS 10 replaces International Accounting Standard (IAS) 27, Consolidated and Separate Financial Statements, and SIC-12, Consolidation Special Purpose Entities, and establishes principles for identifying when an entity controls other entities. IFRS 12 establishes comprehensive disclosure requirements for all forms of interests in other entities, including joint arrangements, associates, and special purpose vehicles. These standards are effective for annual periods beginning on or after January 1, 2013. Earlier application is permitted if adopted concurrently.
- > IFRS 13, Fair Value Measurement, provides a single source of fair value measurement and disclosure requirements in IFRS. This standard is effective for annual periods beginning on or after January 1, 2013, with earlier adoption permitted.
- > Amendments to IAS 1, Presentation of Financial Statements, require entities to group items within other comprehensive income that may be reclassified to net income. This amendment is effective for years beginning on or after July 1, 2012, with earlier adoption permitted.
- > Amendments to IAS 19, Employee Benefits, to eliminate the corridor method that defers the recognition of gains and losses, to streamline the presentation of changes in assets and liabilities arising from defined benefit plans and to enhance the disclosure requirements for defined benefit plans. This amendment is effective for years beginning on or after January 1, 2013, with earlier adoption permitted.
- > Amendments to IFRS 7, Financial Instruments, to enhance disclosure requirements for the offsetting of financial assets and liabilities.

  This amendment is effective for years beginning on or after January 1, 2013, with earlier adoption permitted.

AECL intends to adopt these standards when they become effective. The Corporation is currently evaluating the impact of adopting these standards and amendments on its financial statements.

### 5. Trade and Other Receivables

|                                       | Ma      | rch 31                                  |
|---------------------------------------|---------|---|
| (thousands of Canadian dollars)       | 2013    | 2012                                    |
|                                       | \$      | \$                                      |
| Trade receivables                     | 250,986 | 249,800                                 |
| Less: allowance for doubtful accounts | (317)   | *************************************** |
| Net trade receivables                 | 250,669 | 249,800                                 |
| Other receivables:                    |         |   |
| Unbilled revenue                      | 32,064  | 27,689                                  |
| Prepaid expenses                      | 11,733  | 11,580                                  |
| Consumption taxes receivable          | 6,773   | 8,128                                   |
| Other receivables                     | 28,904  | 40,924                                  |
|                                       | 330,143 | 338,121                                 |

Other receivables include insurance proceeds receivable for the Point Lepreau life extension project and advances on life extension projects.



The aging of gross trade receivables at each reporting date was as follows:

|                                 | March 31 |         |  |
|---------------------------------|----------|---------|--|
| (thousands of Canadian dollars) | 2013     | 2012    |  |
|                                 | \$       | \$      |  |
| Current                         | 12,672   | 30,392  |  |
| 1 to 3 months                   | 12,810   | 44,412  |  |
| 3 to 6 months                   | 742      | 48,832  |  |
| 6 to 12 months                  | 9,365    | 45,058  |  |
| More than 12 months (past due)  | 215,397  | 81,106  |  |
|                                 | 250,986  | 249,800 |  |

The Corporation is exposed to normal credit risk with respect to its Trade and other receivables and maintains allowances for specific potential credit losses. The allowance for doubtful accounts represents Management's estimate of the expected credit losses to be incurred and is based on past experience with similar receivables and economic conditions. Should actual credit losses differ from Management's current estimates, future earnings will be affected. AECL is working to collect its outstanding trade receivables in accordance with the terms of its sales contracts.

The change in allowance for doubtful accounts was as follows:

| March 31 |                               |  |
|----------|-------------------------------|--|
| 2013     | 2012                          |  |
| \$       | \$                            |  |
| _        | 1,141                         |  |
| (317)    | ****                          |  |
| _        | (102                          |  |
| _        | (1,039                        |  |
| (317)    | -                             |  |
|          | 2013<br>\$<br>—<br>(317)<br>— |  |

The Corporation's exposure to credit risks related to Trade and other receivables, including unbilled revenue, is disclosed in Note 25.

# 6. Inventory

|                                 |         | March 31  |         |         | March 31  |         |
|---------------------------------|---------|-----------|---------|---------|-----------|---------|
| (thousands of Canadian dollars) |         | 2013      |         |         | 2012      |         |
|                                 | Gross   | Allowance | Net     | Gross   | Allowance | Net     |
|                                 | 8       | \$        | 8       | \$      | \$        | \$      |
| Consignment inventory           | 210     | _         | 210     | 210     | _         | 210     |
| Raw materials                   | 1,429   | _         | 1,429   | 1,789   | _         | 1,789   |
| Work in progress                | 6,810   | _         | 6,810   | 7,965   | _         | 7,965   |
| Finished products               | 4,174   | _         | 4,174   | 4,146   | _         | 4,146   |
| Reactor fuel                    | 12,623  | _         | 12,623  | 14,110  | _         | 14,110  |
| Spare parts and store supplies  | 14,375  | (848)     | 13,527  | 15,110  | (41)      | 15,069  |
|                                 | 26,998  | (848)     | 26,150  | 29,220  | (41)      | 29,179  |
| Heavy water inventory           | 305,108 | (15,001)  | 290,107 | 305,470 | (14,871)  | 290,599 |

The cost of inventory for reactor fuel and spare parts and store supplies recognized as an expense and included in Cost of sales and Operating expenses was \$26.0 million (2012 - \$29.4 million). The total amount of inventory written down in 2013 was \$0.4 million (2012 - \$4.5 million).

In addition to internal consumption of heavy water at the Chalk River Laboratories, the cost of inventory for heavy water recognized as an expense and included in Cost of sales was NiI (2012 - \$0.2 million). The total amount of heavy water written down in 2013 was \$0.1 million (2012 - NiI).

AECL had no reversals of write-downs and no inventory pledged as security for liabilities.

# 7. Long-Term Receivables

|   | Mai      | rch 31   |
|---|----------|----------|
| (thousands of Canadian dollars)   | 2013     | 2012     |
|   | \$       | \$       |
| Contract receivables from customers in respect of the financing of products and services, |          |          |
| maturing through 2019 at fixed repayment amounts  | 127,597  | 149,283  |
| Current portion   | (22,566) | (21,319) |
|   | 105,031  | 127,964  |

The contract receivables primarily relate to heavy water sales in prior years. The amount is repayable to the Corporation based on a fixed repayment schedule through 2019. The implicit interest rate in the receivable is 5.77% per annum. Required repayment amounts are recorded as operating activities on the Consolidated Cash Flow Statement and are due as follows:

|                               | March 31 |         |  |
|-------------------------------|----------|---------|--|
| housands of Canadian dollars) | 2013     | 2012    |  |
|                               | \$       | \$      |  |
| Less than one year            | 22,566   | 21,319  |  |
| Between one and five years    | 96,644   | 98,497  |  |
| More than five years          | 8,387    | 29,467  |  |
|                               | 127,597  | 149,283 |  |

## 8. Investments Held in Trust

The Nuclear Fuel Waste Act requires Canadian nuclear utilities to form a waste management organization, the Nuclear Waste Management Organization (NWMO), to provide recommendations to the Government of Canada on the long-term management of nuclear fuel waste and to implement the approach selected. The legislation also requires that each nuclear fuel waste owner establish a trust fund to finance implementation of the approach.

The Trust Fund is held in order to meet the requirements of the Act and only the NWMO may withdraw monies from it in accordance with the provisions of the Act, Section II. As required by the Act, AECL's initial deposit to its Trust Fund was \$10 million on November 25, 2002. Subsequent annual deposits of approximately \$2 million have been made as required, and will continue until the full life cycle costs of managing the nuclear fuel waste over the long term are set aside.

The Trust Fund, managed by CIBC on behalf of AECL, invests in fixed income instruments, with various maturities. The fund has been consolidated and the investments held by the fund are recorded as a long-term asset and measured at fair value through profit or loss. Interest earned from the fund offsets financial expense related to the Decommissioning and waste management provision (Notes 14 and 23). Quoted market values of the instruments are estimated at \$42.5 million as at March 31, 2013 (March 31, 2012 – \$39.3 million). Interest earned on trust assets accrues to the Trust Fund. Interest earned on these instruments is fixed, whereas the fair values of the instruments vary according to the prevailing market rate of interest. These investments are comprised of the following:

|                                 |                           | March 31 |       | March 31 |       |
|---------------------------------|---------------------------|----------|-------|----------|-------|
| (thousands of Canadian dollars) | Maturities                | 2013     | Yield | 2012     | Yield |
|                                 |                           | 8        | %     | 5        | %     |
| Cash equivalents*               | Not applicable            | 1,424    | 0.0   | 1,438    | 0.0   |
| Canadian government bonds**     | June 2013 - June 2023     | 29,848   | 3.4   | 27,227   | 3.6   |
|                                 | March 2015 - January 2017 | 11,205   | 2.9   | 10,640   | 3.2   |
|                                 |                           | 42,477   |       | 39,305   |       |

<sup>\*</sup>Cash equivalents consist mainly of short-term money market instruments with original maturities less than 90 days.

# 9. Property, Plant and Equipment

2013

| (thousands of Canadian dollars)               | Construction in progress | Land and land improvements | Buildings | Reactors,<br>Machinery and<br>Equipment | Total    |
|---|--------------------------|----------------------------|-----------|---|----------|
| (modulate) or candidate domain)               | in progress              | \$                         | Ś         | S                                       | \$       |
| Commercial Operations (Discontinued Operation | ons)                     |                            |           |   |          |
| Cost at March 31, 2012                        | _                        | 398                        | 9,422     | 2,438                                   | 12,258   |
| Disposals and transfers (Note 27)             | _                        | (36)                       | (5,331)   | (1,867)                                 | (7,234)  |
| Cost at March 31, 2013                        | _                        | 362                        | 4,091     | 571                                     | 5,024    |
| Depreciation at March 31, 2012                | _                        | 40                         | 5,528     | 1,432                                   | 7,000    |
| Impairment                                    | _                        | 336                        | 3,881     | 485                                     | 4,702    |
| Disposals (Note 27)                           | _                        | (14)                       | (5,318)   | (1,346)                                 | (6,678)  |
| Depreciation at March 31, 2013                | _                        | 362                        | 4,091     | 571                                     | 5,024    |
| Net carrying amount at March 31, 2012         | _                        | 358                        | 3,894     | 1,006                                   | 5,258    |
| Net carrying amount at March 31, 2013         | _                        | -                          | -         | -                                       | _        |
| Nuclear Laboratories                          |                          |                            |           |   |          |
| Cost at March 31, 2012                        | 69,319                   | 50,320                     | 260,483   | 350,335                                 | 730,457  |
| Additions and transfers                       | 59,484                   | 2,110                      | 1,577     | 35,359                                  | 98,530   |
| Disposals and transfers                       | (38,793)                 | _                          | (155)     | (2,248)                                 | (41,196) |
| Other changes                                 | _                        | _                          | (8,968)   | _                                       | (8,968)  |
| Cost at March 31, 2013                        | 90,010                   | 52,430                     | 252,937   | 383,446                                 | 778,823  |
| Depreciation at March 31, 2012                | _                        | 31,679                     | 168,147   | 272,612                                 | 472,438  |
| Increase in depreciation                      | _                        | 1,896                      | 7,041     | 12,565                                  | 21,502   |
| Disposals                                     |                          | _                          | (136)     | (1,352)                                 | (1,488)  |
| Depreciation at March 31, 2013                | _                        | 33,575                     | 175,052   | 283,825                                 | 492,452  |
| Net carrying amount at March 31, 2012         | 69,319                   | 18,641                     | 92,336    | 77,723                                  | 258,019  |
| Net carrying amount at March 31, 2013         | 90,010                   | 18,855                     | 77,885    | 99,621                                  | 286,371  |
| Total at March 31, 2012                       | 69,319                   | 18,999                     | 96,230    | 78,729                                  | 263,277  |
| Total at March 31, 2013                       | 90,010                   | 18,855                     | 77,885    | 99,621                                  | 286,371  |

<sup>\*\*</sup>Canadian government bonds include federal, provincial and municipal bonds.

| (thousands of Canadian dollars)               | Construction in progress | Land and land improvements | Buildings | Reactors,<br>Machinery and<br>Equipment | Total    |
|---|--------------------------|----------------------------|-----------|---|----------|
|   | \$                       | \$                         | \$        | \$                                      | \$       |
| Commercial Operations (Discontinued Operation | ons)                     |                            |           |   |          |
| Cost at March 31, 2011                        | 3,291                    | 1,536                      | 23,894    | 38,453                                  | 67,174   |
| Additions and transfers                       | 621                      | *                          | 1,262     | 787                                     | 2,670    |
| Disposals and transfers (Note 27)             | (3,912)                  | (1,138)                    | (15,734)  | (36,802)                                | (57,586) |
| Cost at March 31, 2012                        | _                        | 398                        | 9,422     | 2,438                                   | 12,258   |
| Depreciation at March 31, 2011                | _                        | 292                        | 14,653    | 25,730                                  | 40,675   |
| Increase in depreciation                      | _                        | 31                         | 486       | 1,677                                   | 2,194    |
| Impairment                                    | _                        | 163                        | 2,251     | 5,431                                   | 7,845    |
| Disposals (Note 27)                           | _                        | (446)                      | (11,862)  | (31,406)                                | (43,714) |
| Depreciation at March 31, 2012                | _                        | 40                         | 5,528     | 1,432                                   | 7,000    |
| Net carrying amount at March 31, 2011         | 3,291                    | 1,244                      | 9,241     | 12,723                                  | 26,499   |
| Net carrying amount at March 31, 2012         | _                        | 358                        | 3,894     | 1,006                                   | 5,258    |
| Nuclear Laboratories                          |                          |                            |           |   |          |
| Cost at March 31, 2011                        | 50,714                   | 50,081                     | 241,025   | 329,922                                 | 671,742  |
| Additions and transfers                       | 45,339                   | 239                        | 1,082     | 23,662                                  | 70,322   |
| Disposals and transfers                       | (26,734)                 | _                          | _         | (3,249)                                 | (29,983  |
| Other changes                                 | _                        | -                          | 18,376    | _                                       | 18,376   |
| Cost at March 31, 2012                        | 69,319                   | 50,320                     | 260,483   | 350,335                                 | 730,457  |
| Depreciation at March 31, 2011                | -                        | 29,859                     | 164,591   | 265,056                                 | 459,506  |
| Increase in depreciation                      | _                        | 1,820                      | 3,556     | 9,216                                   | 14,592   |
| Impairment                                    | _                        | _                          | _         | 795                                     | 795      |
| Disposals                                     |                          | _                          | _         | (2,455)                                 | (2,455   |
| Depreciation at March 31, 2012                | _                        | 31,679                     | 168,147   | 272,612                                 | 472,438  |
| Net carrying amount at March 31, 2011         | 50,714                   | 20,222                     | 76,434    | 64,866                                  | 212,236  |
| Net carrying amount at March 31, 2012         | 69,319                   | 18,641                     | 92,336    | 77,723                                  | 258,019  |
| Total at March 31, 2011                       | 54,005                   | 21,466                     | 85,675    | 77,589                                  | 238,735  |
| Total at March 31, 2012                       | 69,319                   | 18,999                     | 96,230    | 78,729                                  | 263,277  |

Depreciation of property, plant and equipment for the year ended March 31, 2013 was \$21.5 million (2012 – \$16.9 million). Fully depreciated property, plant and equipment with a cost of \$392.4 million (March 31, 2012 – \$387.4 million) is still in use.

Impairment charges of \$4.7 million were recorded in 2013 and are included in Discontinued operations (note 27). In 2012, Impairment charges of \$8.6 million were recorded of which \$7.8 million is included in Discontinued operations and \$0.8 million, relating to Nuclear Laboratories, is included in Operating expenses.

# 10. Intangible Assets

|   | Ma    | rch 31  |
|---|-------|---------|
| (thousands of Canadian dollars)           | 2013  | 2012    |
|   | \$    | \$      |
| Software                                  |       |         |
| Cost – Beginning of period                | 2,104 | 10,101  |
| Additions                                 | 265   | 2,104   |
| Disposals                                 | _     | (10,101 |
| Cost — End of period                      | 2,369 | 2,104   |
| Amortization — Beginning of period        | 411   | 7,494   |
| Increase in amortization                  | 447   | 932     |
| Impairment                                | _     | 741     |
| Disposals (Note 27)                       | _     | (8,756  |
| Amortization — End of period              | 858   | 411     |
| Net carrying amount — Beginning of period | 1,693 | 2,607   |
| Net carrying amount — End of period       | 1,511 | 1,693   |

The Amortization of Intangible assets is recognized in Operating expenses in the Consolidated Statement of Comprehensive Income (Loss).

Total Research and Development costs for the current year were \$353.6 million (2012 – \$384.1 million), of which none (2012 – Nil) met the criteria for capitalization. This included other commercial research and development costs under Commercial Operations of Nil (2012 – \$23.6 million). Under Nuclear Laboratories, CANDU technology research and development costs were \$77 million (2012 – \$69.7 million) and facilities, nuclear operations and support costs were \$276.6 million (2012 – \$290.8 million).

Impairment charges of Nil were recorded in 2013 (2012 – \$0.7 million and included in discontinued operations (note 27)).

# 11. Trade and Other Payables

|  | March 31 |         |
|--|----------|---------|
| (thousands of Canadian dollars)                | 2013     | 2012    |
|  | \$       | \$      |
| Trade payables                                 | 19,529   | 34,530  |
| Other payables and accrued expenses            | 62,574   | 69,127  |
| Accrued payroll liabilities                    | 31,812   | 29,033  |
| Current portion of employee benefits (Note 16) | 12,232   | 6,153   |
| Amounts due to related parties                 | 14,132   | 10,838  |
| Amounts due to Shareholder                     | 1,002    | 8,745   |
|  | 141,281  | 158,426 |

The carrying values of trade and other payables are considered to be a reasonable approximation of fair value due to their short-term nature.

The Amounts due to Shareholder represent Royalty revenues. The 2012 balance also includes the net proceeds from the sale of AECL's Commercial Operations. The Amounts due to related parties represent cash proceeds from the sales of heavy water (Note 19).

# 12. Customer Advances and Obligations

|  | Ma      | arch 31 |
|--|---------|---------|
| (thousands of Canadian dollars)        | 2013    | 2012    |
|  | 8       | \$      |
| Customer advances and unearned revenue | 167,774 | 316,601 |

Customer advances are comprised of billings collected in excess of revenue recognized and advances for which the related work has not started.

# 13. Provisions

(thousands of Canadian dollars)

|                              | Contract Loss<br>Provision | Other   | Total     |
|------------------------------|----------------------------|---------|-----------|
|                              | \$                         | \$      | \$        |
| Balance at March 31, 2011    | 205,435                    | 17,554  | 222,989   |
| Additions                    | 86,589                     | 7,521   | 94,110    |
| Utilized in year             | (135,812)                  | (2,404) | (138,216) |
| Reduction from remeasurement | (56,573)                   | (810)   | (57,383   |
| Balance at March 31, 2012    | 99,639                     | 21,861  | 121,500   |
| Additions                    | _                          | 23,984  | 23,984    |
| Utilized in year             | (14,269)                   | (2,994) | (17,263   |
| Reduction from remeasurement | (53,812)                   | _       | (53,812   |
| Balance at March 31, 2013    | 31,558                     | 42,851  | 74,409    |

Completion of certain life extension projects and near completion of other projects have resulted in a decrease of \$68.1 million (2012 – \$105.8 million) in contract loss provision. It is expected that these expenditures will be incurred within two to three years following the reporting period.

Other provisions include exposure to claims related to life extension projects as well as warranties, lawsuits and legal claims, disputes with suppliers and an onerous lease. It is expected that these expenditures will be incurred within two to three years following the reporting period.

### 14. Decommissioning and Waste Management Provision

AECL has an obligation to decommission its nuclear facilities and other assets in order to satisfy CNSC and other applicable regulations. These facilities include prototype reactors, heavy water plants, nuclear research and development, waste management and other facilities. Due to the variety of facilities, the decommissioning process may differ in each case. In some situations, decommissioning activities are carried out in stages, with intervals of several decades between them, to allow radioactivity to decay before moving on to the next stage. These activities include surveillance and monitoring, decontamination, demolition and the management of the associated waste. A significant portion of the liabilities relate to obligations that existed prior to the creation of AECL in 1952.

The decommissioning plan follows a hierarchy of activities to achieve:

- > A controlled and controllable state for all redundant nuclear facilities that removes short-term risks.
- > A sustainable, stable and safe state of the facilities under surveillance.
- > Cost-optimized completion of actions to achieve a final end state that is an accepted completion of the decommissioning process as required by the regulator.

Previously, AECL retained proceeds from heavy water sales to fund the decommissioning program (Note 19). The Government requires AECL to account for waste, decommissioning or site restoration liabilities resulting from AECL's ongoing operations after April 1, 2006. The liabilities resulting from AECL's ongoing operations from April 1, 2006 to March 31, 2013 have been established in the re-estimate of the decommissioning liability.

AECL undertook, in 2012–2013, a comprehensive review of the long-term decommissioning strategy and related cost estimate. That review resulted in a re-estimate of cost and timing of several projects comprising the liability as well an increase in the portion of AECL's corporate services and site operations support costs attributed to the decommissioning liability. This review is the result of new information that has not been available in prior periods and has resulted in a \$2.1 billion increase in the liability as the estimated expenditures are higher and will be incurred at a time sooner than that previously used to value the liability. In accordance with IAS 8, the Corporation has treated the financial impact as a change in estimate. The change in estimate is recorded as a Revaluation loss on decommissioning and waste management in the statement of comprehensive income (loss).

The Decommissioning and waste management provision is as follows:

| March 31  |   |  |
|-----------|---|--|
| 2013      | 2012  |  |
| \$        | \$  |  |
| 5,543,030 | 4,117,635   |  |
| 135,500   | 136,900   |  |
| (135,342) | (124,311)   |  |
| 145,952   | 152,388   |  |
| 227,508   | 1,218,705   |  |
| 2,064,173 | 164,107   |  |
| (10,781)  | 1,062   |  |
| _         | 12,044  |  |
| 7,970,040 | 5,678,530   |  |
| (205,000) | (135,500  |  |
| 7,765,040 | 5,543,030   |  |
|           | 2013<br>\$ 5,543,030 135,500 (135,342) 145,952 227,508 2,064,173 (10,781) 7,970,040 (205,000) |  |

The undiscounted future expenditures for the plan projects comprising the liability are \$9,984.8 million (March 31, 2012 - \$7,408.6 million) in current dollars. The provision is re-valued at the current discount rate in effect at each balance sheet date. The majority of these expenditures will be incurred prior to 2090 with a portion representing less than 1% of the liability being spent beyond that date.

The provision as at March 31, 2013 was discounted using a rate of 2.50%. The balance as at March 31, 2012 was discounted using a rate of 2.66%.

The effect of a change in the discount rate on the provision is recognized in Revaluation of decommissioning and waste management liability and other in the Consolidated Statement of Comprehensive Income (Loss). The total charge for the year was \$227.5 million (2012 – \$1,218.7 million).

Key assumptions used in determining the provision:

|                 | Ma        | March 31 |  |
|-----------------|-----------|----------|--|
|                 | 2013      | 2012     |  |
| Discount period | 151 years | 78 years |  |
| Discount rate   | 2.50%     | 2.66%    |  |
| Inflation rate  | 1.70%     | 1.70%    |  |

The provision is highly sensitive to the interest rate used to discount the future expenditures. The following table outlines the sensitivity of a 1% change in the discount rate used to estimate the provision.

|                                | March   | 31      |
|--------------------------------|---------|---------|
| (millions of Canadian dollars) | 2013    | 2012    |
|                                | 8       | \$      |
| 1% increase                    | (1,673) | (1,153) |
| 1% decrease                    | 2,464   | 1,687   |

# 15. Deferred Capital Funding

Deferred capital funding was provided to the Corporation through appropriations from its Shareholder (Notes 21, 24) as follows:

|   | Mar      | rch 31   |
|---|----------|----------|
| (thousands of Canadian dollars)           | 2013     | 2012     |
|   | \$       | \$       |
| Deferred capital funding, opening balance | 192,314  | 156,973  |
| Capital funding received during the year  | 59,483   | 45,427   |
| Amortization of deferred capital funding  | (12,937) | (10,086) |
| Deferred capital funding, closing balance | 238,860  | 192,314  |

# 16. Employee Benefits

### a) Pension Plan

As described in Note 4(I), the Corporation's employees participate in the Public Service Pension Plan. Contributions are made to three accounts: Public Service Superannuation Account, Public Service Pension Fund account, and the Retirement Compensation Arrangement account.

Total contributions made on account of current service are as follows:

### Contributions to the Plan

| For the year ended              | March 31 |        |  |
|---------------------------------|----------|--------|--|
| (thousands of Canadian dollars) | 2013     | 2012   |  |
|                                 | \$       | 5      |  |
| Payments by employees           | 18,669   | 22,071 |  |
| Payments by employer            | 33,976   | 43,129 |  |

The Corporation's rate of contribution to the Public Service Superannuation Account equals the employee contributions and the Corporation's contributions to the Public Service Pension Fund account is a 1.64 multiple of the employee contributions (March 31, 2012 - 1.74). The Corporation's contribution to the Retirement Compensation Arrangement account for calendar year 2013 is a multiple of 8.0 of the employee contributions (calendar year 2012 - 8.95). The multiple is subject to change based on revaluation by the Public Service Pension Plan ("Plan") administration.

Substantially all of the employees of the Corporation are covered by the Plan, a contributory defined benefit plan established through legislation and sponsored by the Government of Canada. Contributions are required by both the employees and the Corporation. The President of the Treasury Board of Canada sets the required employer contributions based on a multiple of the employees' required contribution. The general employer contribution rate effective during the year was 13.3% of employee salaries (2012 – 13.5%). Total contributions of \$34.0 million (2012 – \$43.1 million) were recognized as an expense in the year.

The Government of Canada holds a statutory obligation for the payment of benefits relating to the Plan. Pension benefits generally accrue up to a maximum period of 35 years at an annual rate of two per cent of pensionable service, times the average of the best five consecutive years of earnings. The benefits are coordinated with Canada/Québec Pension Plan benefits and they are indexed to inflation.

### b) Employee Benefits

The Corporation provides certain voluntary termination compensation (VTC) and other post-employment benefits as described in Note 4(m). The defined benefit obligation is not funded, as funding is provided when benefits are paid. Accordingly, there are no plan assets and the defined plan deficit is equal to the defined benefit obligation.

The VTC included in the 2012 Employee benefits liability is \$42.3 million and is payable in instances of future voluntary resignations and retirements. Consistent with Government of Canada expectations of federal agencies or Crown corporations, AECL began eliminating this benefit throughout fiscal 2012–2013.

As the elimination of the VTC is agreed upon and implemented, employees eligible for payment of the accrued benefits are offered three options with respect to the timing of the payments: receive the entire payment immediately; receive the entire payment at the time of termination of employment; or a combination of the first two options. These options impact the reported net present value of the Employee benefits liability. As a result, a settlement loss of \$5.9 million has been recorded to reflect the impact of employees that have chosen or are expected to choose the immediate payment option.

The VTC included in the 2013 Employee benefits liability is \$21.9 million. This balance includes the amounts for employees who have chosen to defer payment to the time of the termination of their employment, have not chosen an option as affected employees have up to six months to decide on their payment option and those whose bargaining units have not negotiated or ratified agreements to eliminate the VTC as of March 31, 2013.

The measurement date of the Employee benefits liability is March 31, 2013, and the latest actuarial valuation of these benefits was performed at that date.

The following summarizes the activity in the post-employment and other long-term benefit plans:

| For the year ended  | Mar      | rch 31   |
|---|----------|----------|
| (thousands of Canadian dollars)                                   | 2013     | 2012     |
|   | 8        | \$       |
| Employee benefits liability, beginning of year                    | 53,860   | 67,407   |
| Employee benefits liability, beginning of year — current portion* | 6,153    | 9,977    |
| Current service cost  | 1,840    | 4,134    |
| Interest on Employee benefits liability                           | 1,559    | 3,074    |
| Benefits paid   | (30,853) | (6,072)  |
| Reduction due to restructuring**                                  |          | (20,122) |
| Settlement loss***  | 5,913    | _        |
| Actuarial losses  | 1,735    | 1,615    |
| Employee benefits liability, end of year                          | 40,207   | 60,013   |
| Current portion, Employee benefits liability*                     | (12,232) | (6,153)  |
| Employee benefits liability                                       | 27,975   | 53,860   |

<sup>\*</sup>The current portion of the Employee benefits liability is included in Trade and other payables.

<sup>\*\*</sup>The reduction due to restructuring relates to the decrease in employees included in the non-pension defined benefit plan as a result of the Phase 1 restructuring of AECL (Notes 2 and 27).

<sup>\*\*\*</sup>The settlement loss relates to the impact of the elimination of the VTC benefit.

The following summarizes expenses arising from the Corporation's post-employment and other long-term benefit plans in the Consolidated Statement of Comprehensive Income (Loss) and in the Corporation's Consolidated Balance Sheet:

| For the year ended              | March 31 |        |
|---------------------------------|----------|--------|
| (thousands of Canadian dollars) | 2013     | 2012   |
|                                 | 8        | \$     |
| Net benefit plan cost           |          |        |
| Current service cost            | 1,840    | 4,134  |
| Interest cost                   | 1,559    | 3,074  |
| Actuarial loss                  | 754      | 3,691  |
| Settlement loss                 | 5,913    | _      |
| Annual benefit plan expense     | 10,066   | 10,899 |

The Annual benefit plan expense relating to Nuclear Laboratories employees is recognized in Cost of sales and Operating expenses in the Consolidated Statement of Comprehensive Income (Loss). The Annual benefit plan expense relating to Commercial Operations employees is recognized in Cost of sales and Operating expenses in Discontinued Operations (Note 27).

The cumulative actuarial gains recorded in Other Comprehensive Income (Loss) as of March 31, 2013 is \$0.4 million (2012 – \$1.4 million).

The Corporation expects \$12.2 million in contributions to be paid to its defined benefit plans in 2014.

The following table summarizes the experience adjustments arising on plan liabilities:

| For the year ended                           |      | March 31 |      |
|--|------|----------|------|
| (thousands of Canadian dollars)              | 2013 | 2012     | 2011 |
|  | \$   | \$       | \$   |
| Experience gains arising on plan liabilities | 319  | 4,403    | 994  |

The significant actuarial assumptions adopted in measuring the Corporation's Employee benefits are summarized as follows:

# **Actuarial assumptions**

|                              | March 31 |       |
|------------------------------|----------|-------|
|                              | 2013     | 2012  |
| Discount rate                | 3.50%    | 3.90% |
| Rate of increase in salaries | 3.50%    | 2.00% |
| Inflation rate               | 2.50%    | 2.50% |
| Health care cost trend       | 5.00%    | 5.00% |

A 1% increase or decrease in the Health care cost trend will not have a material impact on the defined benefit obligation.

# 17. Long-Term Payables

|  | Mai  | rch 31 |
|--|------|--------|
| (thousands of Canadian dollars)                              | 2013 | 2012   |
|  | 8    | \$     |
| Long-term payable  | _    | 6,660  |
| Unsecured, non interest bearing, maturing September 2012     |      |        |
| Amount is recorded net of discount of \$1.7 million at 4.08% |      |        |
|  | _    | 6,660  |
| Less current portion   | _    | (6,660 |
|  | _    | -      |

# Required payments over subsequent years are as follows:

|                                 | Marc | March 31 |  |
|---------------------------------|------|----------|--|
| (thousands of Canadian dollars) | 2013 | 2012     |  |
|                                 | \$   | \$       |  |
| Less than one year              | _    | 6,660    |  |
| Between one and five years      |      | _        |  |
|                                 |      | 6,660    |  |

Long-term payables related to inventory purchased from MDS (Canada) Inc. in February 2006. AECL entered into an agreement with MDS (Canada) Inc. whereby AECL acquired beneficial ownership of the Dedicated Isotope Facilities, comprised of two medical isotope-producing reactors (MAPLE 1 and 2) and their related processing facility. Additionally, AECL acquired \$53 million of isotopes production related inventory with a deferred payment obligation of 48 monthly instalments of \$1.1 million, commencing in October 2008. The value of the inventory and the related deferred obligation were recorded at \$41.7 million (Fuel and Targets), and \$2.5 million (Spare parts), the present value of these future payments.

An imputed interest expense of \$0.1 million (2012 - \$0.6 million), related to the discount on the long-term payable, was included in Financial expenses in the Consolidated Statement of Comprehensive Income (Loss) (Note 23). Required payments are disclosed at the undiscounted amount.

# 18. Commitments, Contingencies and Obligations

## a) Operating Leases and Other Commitments

Non-cancellable operating lease rentals and other commitments are payable as follows:

|                                 | Mar    | March 31 |  |
|---------------------------------|--------|----------|--|
| (thousands of Canadian dollars) | 2013   | 2012     |  |
|                                 | 8      | \$       |  |
| Less than one year              | 5,603  | 41,710   |  |
| Between one and five years      | 8,724  | 8,671    |  |
| More than five years            | 2,917  | 4,433    |  |
|                                 | 17,244 | 54,814   |  |

The Corporation leases office space under operating leases with various expiration dates. The leases contain an escalation clause providing for additional rent. The Corporation also enters into other non-cancellable agreements facilitating operations and project requirements. During the year ended March 31, 2013, an amount of \$3.7 million (2012 -\$9.2 million) was recognized as an expense in Comprehensive Income (Loss) in respect of operating leases.

The total of future sublease payments to be received is \$4.3 million.

### b) Regulatory Obligations

To ensure compliance with CNSC site licence conditions and other regulatory requirements, the Corporation has undertaken major investment in building and facilities infrastructure at the Chalk River site. The Corporation's planned expenditure on these initiatives for 2013—2014 is \$90.4 million. These obligations are funded through Parliamentary appropriations.

# c) Performance Guarantees and Liquidated Damages

It is industry practice to use letters of credit, surety bonds and other performance guarantees on major contracts. Such guarantees may include guarantees that a project will be completed or that a project or particular equipment will meet defined performance criteria. Liquidated damages are provided for in contracts and provide for compensation to be paid upon a specific breach of that contract (e.g. late performance).

In the normal course of business, AECL also guarantees that certain projects will be completed within a specified time and may bear responsibility for liquidated damages should obligations not be met.

The aggregate amount of the Corporation's potential exposure under the performance guarantees is estimated to be approximately \$38 million (2012 – \$150 million). Liquidated damages penalties are estimated at \$60 million at March 31, 2013 (2012 – \$60 million) and are expensed in the financial statements in Discontinued Operations. As described in Note 4(n), on an ongoing basis, management reviews the progress on long-term projects (such as life extension projects, Note 13) to determine if liquidated damages penalties will be incurred. When it is probable that these penalties will be incurred and they are measurable, liquidated damages penalties are included in the revised calculation of revenue and/or contract loss provisions on those projects.

# d) Lawsuits and Legal Claims

On July 8, 2008, Nordion (Canada) Inc. ("Nordion") commenced legal proceedings against AECL and the Government in connection with AECL's isotope business, consisting of a civil action and arbitration. The amount claimed against AECL and the Government was \$1.6 billion. In 2012—2013 a decision was received by AECL from the arbitration tribunal adjudicating this dispute. The majority of the tribunal affirmed AECL's position in the arbitration and Nordion's claim was dismissed. With respect to the civil action, which was stayed until the arbitration was determined, the pleadings are in the process of being amended, and are not yet complete, nor have there been any discoveries or production of documents.

On August 3, 2012, Bruce Power A L.P. (BALP) and AECL exchanged Statements which commenced arbitration proceedings in connection with the refurbishment of units 1 and 2 of the Bruce A generating station. The parties exchanged Answers on April 1, 2013, and Replies on June 21, 2013. BALP filed a supplementary Statement on June 18, 2013. The information usually required by IAS 37 Provisions, Contingent Liabilities and Contingent Assets is not disclosed on the grounds that the arbitration is confidential. AECL is of the opinion that it will be successful in its claim against BALP, and in its defence of the BALP claims. At March 31, 2013 Trade and Other Receivables included amounts owing from Bruce Power, which are significantly aged (greater than twelve months — Note 5) and expected to be dispositioned as part of the arbitration proceeding.

In addition to the matter described above, the Corporation is engaged in various legal proceedings and claims that have arisen in the ordinary course of business. The outcome of all of the proceedings and claims against the Corporation is subject to future resolution, including the uncertainties of litigation. Based on information currently known to the Corporation and after consultation with outside legal counsel, Management believes that the probable ultimate resolution of any such proceedings and claims, individually or in the aggregate, will not have a material adverse effect on the financial condition of the Corporation.

# e) EC6 Development

During the year ended March 31, 2012, AECL entered into a contract with Candu Energy Inc. to provide, from the Government of Canada, up to \$75 million to support the completion of the EC6 development program. As at March 31, 2013, \$50 million of this amount (2012 – \$18 million) has been expensed and \$49 million (2012 – \$12 million) has been paid by AECL. Additionally, under certain conditions outlined in the contract with Candu Energy Inc., AECL may be responsible for reimbursing Candu Energy Inc. for certain other costs.

# 19. Contributed Capital and Deferred Decommissioning Funding

Included in contributed capital is approximately \$82 million (March 31, 2012 – \$109 million) related to Parliamentary appropriations received for the production of heavy water inventory. Up to and including 1995–1996, the Corporation was required to repay the Government, by way of a dividend, the cash proceeds from the sale of Government-funded heavy water.

From 1997 to 2006, a Decision by the Treasury Board directed the Corporation to hold the proceeds from the sale or lease of Government-funded heavy water in a segregated fund for use in decommissioning activities for the 10-year period following the Decision. As Government-funded heavy water was sold or leased, the cash proceeds were transferred from Contributed capital to Deferred decommissioning funding, which was used to fund ongoing decommissioning activities.

An annual amount equivalent to the proceeds from sales made during the 10-year arrangement received after April 1, 2006 (Notes 7 and 4(o)) is transferred from contributed capital to deferred decommissioning funding. However, the funds are not required to be segregated for use in decommissioning activities. Other cash proceeds from heavy water sales are recorded as amounts due to related parties and are presented in Trade and other payables (Note 11) on the Corporation's Consolidated Balance Sheet.

### 20. Revenue

| (thousands of Canadian dollars) | March 31 |        |
|---------------------------------|----------|--------|
|                                 | 2013     | 2012   |
|                                 | \$       | \$     |
| Services                        | 56,878   | 49,013 |
| Sales of goods                  | 27,198   | 26,196 |
| Royalties                       | 2,705    | 1,011  |
|                                 | 86,781   | 76,220 |

# 21. Funding

### a) Parliamentary Appropriations

AECL segregates its Parliamentary appropriations, which included Statutory Funding, to ensure funds are spent in a manner consistent with the basis for which they were approved. Approved Main Estimates include amounts for Facilities and Nuclear Operations and Research and Development. Approved Supplementary Estimates are in support of the operation and maintenance of the Chalk River Laboratories and are used as an augmentation to the Main Estimates. Statutory Funding was received for expenditures associated with the divestiture of the Commercial business.

During the year, Parliamentary appropriations were received as follows:

|  | March 31 |         |
|--|----------|---------|
| (thousands of Canadian dollars)                      | 2013     | 2012    |
|  | \$       | \$      |
| Parliamentary appropriations — operating             | 492,362  | 673,603 |
| Parliamentary appropriations – capital               |          |         |
| Capital infrastructure refurbishment project funding | 59,483   | 45,427  |
| Total Parliamentary appropriations                   | 551,845  | 719,030 |

All amounts received in both fiscal 2013 and 2012 relating to operations were recognized in income. All work is expected to be completed within a year.

During the year, the Corporation received the above funding to support planned activities. This funding was used in the following manner:

- > Research and related infrastructure funding to support base operating expenses for AECL's Chalk River Laboratories.
- > Government funding was used to place the Dedicated Isotope Facilities into an extended shutdown state.
- > Nuclear Laboratories regulatory, health, safety, security and environment initiatives funding was allocated to the revitalization of AECL's Chalk River Laboratories and the maintenance of NRU reactor isotope production.

- > Life extension projects and Wrap-up Office funding was used to bridge the shortfall in the various projects due to re-estimates in project completion costs and toward workforce transition costs related to the divestiture of the Commercial Operations business.
- > Development funding was used for research and development activities relating to the EC6 reactor.

### b) Other Funding

During the year, Other funding was recognized as follows:

| March 31 |   |
|----------|---|
| 2013     | 2012  |
| \$       | \$  |
|          |   |
| 32,160   | 18,176  |
| 12,937   | 10,086  |
| 45,097   | 28,212  |
| 132,685  | 136,693   |
| 177,782  | 164,905   |
|          | 2013<br>\$<br>32,160<br>12,937<br>45,097<br>132,685 |

# 22. Additional Information by Type of Expense

|  | March 31 |         |
|--|----------|---------|
| (thousands of Canadian dollars)                                      | 2013     | 2012    |
|  | 8        | \$      |
| Payroll expenses   | 327,494  | 428,682 |
| Operating leases   | 3,711    | 9,161   |
| Net gains (losses) due to changes in foreign currency exchange rates | 192      | 112     |

Payroll expenses include salaries and related legislated contributions. The expenses relating to Nuclear Laboratories are recognized in Cost of sales and Operating expenses in the Consolidated Statement of Comprehensive Income (Loss). The expenses relating to Commercial Operations are recognized in Cost of sales and Operating expenses in Discontinued Operations (Note 27).

# 23. Financial Income and Expenses

|  | March 31 |         |
|--|----------|---------|
| (thousands of Canadian dollars)  | 2013     | 2012    |
|  | \$       | \$      |
| Financial income   |          |         |
| Interest on long-term receivables  | 7,833    | 9,174   |
| Interest on investments and other  | 603      | 589     |
|  | 8,436    | 9,763   |
| Financial expenses   |          |         |
| Interest on long-term payables   | 79       | 552     |
| Unwinding of decommissioning and waste management provision net of trust fund income | 144,194  | 149,378 |

# 24. Related Party Transactions

Transactions between the Corporation and its subsidiaries have been eliminated on consolidation and have not been disclosed in this note.

The Corporation is controlled by the Government, which owns 100% of the Corporation's shares. The Government, the Plan and governmentcontrolled entities are the primary related parties with which the Corporation transacts.



In addition to the transactions disclosed in Notes 9, 10, 11, 13, 14, 15, 16, 17, 19, 21, and 27 the Corporation had the following transactions with the Government:

- > Program billings to Natural Resources Canada for historic low-level radioactive waste management and decommissioning activities.
- > In the normal course of business, the Corporation also enters into various transactions with the Government, its agencies and other Crown corporations.

AECL also has transactions with its key management personnel. Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Corporation, including the Corporation's directors and executive officers. The table below summarizes the amounts paid or payable to the key management personnel on a comparative basis.

### Remuneration of Key Management Personnel

|  | March 31 |        |
|--|----------|--------|
| (thousands of Canadian dollars)        | 2013     | 2012   |
|  | 8        | \$     |
| Salaries and other short-term benefits | 3,480    | 8,975  |
| Termination benefits                   | _        | 3,000  |
| Post-employment benefits               | 1,575    | 2,893  |
|  | 5,055    | 14,868 |

# 25. Financial Instruments and Financial Risk Management

### Financial assets and liabilities

Financial assets and financial liabilities in the Consolidated Balance Sheet were as follows:

| (thousands of Canadian dollars)   | Assets/(liabilities)<br>at fair value<br>through profit or loss | Loans and receivables | Other<br>financial<br>liabilities | Total     |
|-----------------------------------|---|-----------------------|-----------------------------------|-----------|
|                                   | \$  | \$                    | \$                                | \$        |
| March 31, 2013                    |   |                       |                                   |           |
| Cash and current accounts         | _   | 35,461                | _                                 | 35,461    |
| Investments held in trust*        | 42,477  | _                     | _                                 | 42,477    |
| Trade and other receivables       | _   | 330,143               | _                                 | 330,143   |
| Long-term receivables             | _   | 127,597               | -                                 | 127,597   |
| Trade and other payables          | _   |                       | (141,281)                         | (141,281) |
| Customer advances and obligations | _   | _                     | (167,774)                         | (167,774) |
| Total                             | 42,477  | 493,201               | (309,055)                         | 226,623   |

<sup>\*</sup>Held for trading

| (thousands of Canadian dollars)   | Assets/(liabilities)<br>at fair value<br>through profit or loss | Loans and receivables | Other<br>financial<br>liabilities | Total     |
|-----------------------------------|---|-----------------------|-----------------------------------|-----------|
|                                   | \$  | \$                    | \$                                | \$        |
| March 31, 2012                    |   |                       |                                   |           |
| Cash and current accounts         | -   | 35,439                | -                                 | 35,439    |
| Investments held in trust*        | 39,305  | _                     | -                                 | 39,305    |
| Trade and other receivables       | _   | 338,121               | -                                 | 338,121   |
| Long-term receivables             | -   | 149,283               | -                                 | 149,283   |
| Trade and other payables          | _   | -                     | (158,426)                         | (158,426) |
| Customer advances and obligations | -   | -                     | (316,601)                         | (316,601) |
| Long-term payables                |   | -                     | (6,660)                           | (6,660)   |
| Total                             | 39,305  | 522,843               | (481,687)                         | 80,461    |

<sup>\*</sup>Held for trading

Fair value represents Management's estimate of the market value at the reporting date. The carrying value of all financial liabilities approximates fair value as at March 31, 2013 and March 31, 2012, with the exception of Long-term receivables. The fair value of the long-term portion of the long-term receivables is \$110 million (March 31, 2012 – \$136 million) and is estimated using the long-term interest rate in effect at the end of the reporting period.

### Fair value hierarchy

The following table analyzes financial instruments measured at fair value, by valuation method. The Corporation uses the following hierarchy to classify fair value measurement:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices).

Level 3: Inputs for the asset or liability that are not based on observable market data (unobservable inputs).

|                                   |         | March 3 | 1, 2013 |        |         | March   | 31, 2012 |        |
|-----------------------------------|---------|---------|---------|--------|---------|---------|----------|--------|
| (thousands of Canadian dollars)   | Level 1 | Level 2 | Level 3 | Total  | Level 1 | Level 2 | Level 3  | Total  |
|                                   | \$      | \$      | \$      | \$     | \$      | \$      | \$       | \$     |
| Assets measured at fair value     |         |         |         |        |         |         |          |        |
| Investments held in trust - Bonds | _       | 41,053  | _       | 41,053 |         | 37,867  | _        | 37,867 |

There are no financial liabilities measured at fair value.

#### a) Credit Risk

Credit risk is the risk that one party to the financial instrument may not meet its obligations under the terms of the financial instrument. The Corporation's financial assets exposed to credit risk are Cash, Investments held in trust, Trade and other receivables and Long-term receivables. The maximum exposure to credit risk at the reporting date is the carrying amount of each class of financial assets as disclosed in the tables above. The maximum exposure to credit risk is \$535.7 million (March 31, 2012 – \$562.1 million).

As of March 31, 2013 all investments held in trust are rated as H1 low or higher by the Dominion Bond Rating Service and as A1 or higher by Standard and Poor's.

The objective of managing counterparty credit risk is to prevent losses in financial assets. AECL's exposure is reduced by:

- > Monitoring at the appropriate levels of management.
- > Applying a conservative investment strategy.
- > Ensuring that all instruments mature within a year.

#### Trade Receivables

Exposure to credit risk from Trade receivables is low due to AECL's specific customer base within a government-regulated industry. The potential for credit losses is further mitigated by evaluating customer creditworthiness before credit is extended. The carrying amount of Trade receivables is measured by tracking invoices on an individual basis and any allowance for doubtful accounts is on an invoice-by-invoice basis, with a review and approval process.

Three customers (March 31, 2012 – three), each representing greater than 5% (March 31, 2012 – 4%) of the total accounts receivable, comprise an aggregate 96% (March 31, 2012 - 94%) of total accounts receivable. No significant amounts are due in foreign currency.

### b) Liquidity Risk

This represents the risk that the Corporation will not have sufficient funds to meet its liabilities, commitments and obligations when due.

A major risk facing the Corporation is related to securing a sustainable source of funds to safely maintain its nuclear capabilities. The Corporation's objective in managing liquidity risk is to maintain sufficient readily available reserves in order to meet its liquidity requirements at any point in time. As a Schedule III Part I Crown corporation, AECL is restricted from borrowing funds to meet its obligations. The Corporation is dependent on funding from its Shareholder to meet its obligations.

AECL manages liquidity risk by:

- > Cross-functional participation in project and business reviews.
- > Frequent communication with its Shareholder to manage ongoing cash requirements and secure appropriate funding.
- > Maintaining a portfolio of highly liquid investments or instruments readily convertible into liquidity with high-quality counterparties.

In 2013, AECL's liquidity risk management objectives were unchanged from those in 2012. However, additional funding was required from the Government to meet obligations. As of March 31, 2013, the Corporation was holding cash of \$35.5 million (March 31, 2012 – \$35.4 million). Accounts payable and accrued liabilities of \$141.3 million (March 31, 2012 – \$158.4 million) (Note 11) are due within the year. Long-term payables (Note 17) of Nil million are due within one year (March 31, 2012 – \$6.7 million).

The Corporation's funding plan is part of the Corporate Plan, and is reviewed and approved annually by the Board of Directors and the Government. AECL relies on funding from the Government to continue operations and meet future obligations.

### c) Market Risk

# i. Currency Risk

The Corporation's consolidated financial statements are presented in Canadian dollars, but a portion of its business is conducted in other currencies, with the exposure to foreign currency transactions primarily related to the U.S. dollar. The objective of the Corporation's foreign exchange risk management activities is to minimize transaction exposure and the resulting volatility of the Corporation's earnings and commitments.

As of March 31, 2013 and March 31, 2012, had the exchange rate (CAN\$/US\$) been 5% higher or lower, Comprehensive Income (Loss) for the year would have remained unchanged.

### ii. Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

The objective of the Corporation's interest rate management activities is to minimize the volatility of the Corporation's earnings and expenses. The Corporation's exposure to interest risk is limited to changes in interest rates associated with its investments in bonds and discount rates associated with the decommissioning and waste management provision. Changes in the discount rate are based on a credit adjusted risk-free rate that is sensitive to interest rate fluctuations (see Sensitivity Analysis in Note 14).

### d) Regulatory Risk

The Corporation operates in a highly regulated business environment. Changes in government policy may have an adverse impact on the Corporation's financial position. The Corporation's objective in managing regulatory risk is to actively monitor and implement changes on a timely basis to enable operations. In 2013, AECL's regulatory risk management objectives were unchanged from those in 2012.

# 26. Capital Management

The authorized share capital of the Corporation is comprised of 75,000 common shares with no par value. As at March 31, 2013 and March 31, 2012, 54,000 shares were issued for \$15,000,000.

As a Schedule III Part I Crown corporation under the Financial Administration Act, Her Majesty in Right of Canada owns the shares of the Corporation. Any procurement or disposition of shares can only be undertaken after Parliamentary authorization. Further, AECL's liabilities are ultimately liabilities of Her Majesty in Right of Canada.

AECL's ability to obtain additional capital, either through equity or debt, is pursuant to the provisions of the *Financial Administration Act*. Historically, no long-term debt was put in place. Additional capital arose in the form of Government contributions. At year end, the Corporation had no plans to seek additional capital in the next 12 months.

The Corporation's objective in managing capital is to provide sufficient liquidity to support its financial obligations and its operating and strategic plans, as well as to safeguard its ability to continue as a going concern. This is managed through periodic funding received from the Government, the volume of cash from operations and the portfolio of highly liquid investments or instruments readily convertible into cash with high-quality counterparties. In 2013, AECL's capital management objectives were unchanged from those in 2012.

# Capital for the reporting periods is summarized as follows:

|   | Ma          | arch 31     |  |
|---|-------------|-------------|--|
| (thousands of Canadian dollars)                       | 2013        | 2012        |  |
|   | \$          | \$          |  |
| Shareholder's deficit                                 | (7,655,903) | (5,534,028) |  |
| Long-term payables                                    | _           | 6,660       |  |
| Deferred capital funding                              | 238,860     | 192,314     |  |
| Deferred decommissioning and waste management funding | 171,508     | 147,007     |  |
| Decommissioning and waste management provisions       | 7,970,040   | 5,678,530   |  |
|   | 724,505     | 490,483     |  |

Given the limited amount of capital available from these sources, the Corporation relies principally on operating and capital funding provided by the Shareholder, which is requested in the Corporation's Corporate Plan.

# 27. Discontinued Operations

The Government of Canada completed the sale of its Commercial Operations to SNC-Lavalin subsidiary, Candu Energy Inc. in the 2012 fiscal year. The transaction closed on October 2, 2011, at which point Candu Energy Inc. assumed full ownership and day-to-day operational control over the Commercial Operations.

The sale involved certain AECL-owned assets to Candu Energy Inc. and an exchange of undertakings among the three parties (AECL, SNC-Lavalin and the Government of Canada). A suite of agreements executed at the close of the transaction covers such matters as intellectual property and the provision of inter-company services between AECL and Candu Energy Inc. It also includes sub-contracting agreements relating to the existing life extension projects, whereby Candu Energy Inc. will complete the contracts as a sub-contractor to AECL, which retains contractual responsibility. This work is being undertaken by a small team of AECL personnel located in AECL's Mississauga office and operating as the Wrap-Up Office. With the close of sale, Candu Energy Inc. became responsible for all new projects relating to the CANDU Commercial Operations business.

AECL and Candu Energy Inc. have a strong commercial relationship, governed by terms set out under an Inter-Company Sales Agreement and an Intellectual Property Licence Agreement. The operating results arising from this relationship are recorded under Nuclear Laboratories.

The sale price for these certain AECL-owned assets was \$15 million and was adjusted for closing working capital balances as at the date of the transaction. All proceeds from the sale of the assets were remitted to the Receiver General of Canada.

Under the terms of the sales agreement, AECL is entitled to receive royalty payments resulting from new build and life extension projects contracted by Candu Energy Inc. post-close. These royalty payments are received on behalf of the Government of Canada and are remitted to the Receiver General. As such, they are included in operating expenses in the Consolidated Statement of Comprehensive Income (Loss). The Intellectual Property Licence Agreement from which royalty income will be generated has a 15-year term and became effective on October 2, 2011.

Also as part of the agreement, the Government of Canada, through AECL, began providing Candu Energy Inc. with up to \$75 million in support toward the completion of the Enhanced CANDU Reactor development program (Note 18(e)).

On the October 2, 2011 closing date, Candu Energy Inc. hired 1,522 Commercial Operations personnel, including full-time and contract employees, and 390 AECL employees received termination notices from AECL. In 2012, a restructuring provision was recorded for \$36.5 million of which \$32.6 million has been paid as of March 31, 2013 (2012 – \$30.5 million) and \$3.9 million of the provision remains to complete the process (2012 – \$6.0 million). The restructuring provision consists mainly of estimated termination benefits for affected employees.

The restructuring expense recognized for the year ended March 31, 2012 is \$31.4 million, which includes \$36.5 million of restructuring provision reduced by \$5.1 million for certain benefits forfeited on termination previously accrued as employee benefits.



The entire Commercial Operations are considered a discontinued operation. Income and cash flows for the discontinued operations are reported separately in these consolidated financial statements in accordance with IFRS 5.

In the current fiscal year, the land and building in Mississauga, Ontario used as AECL's corporate headquarters prior to the sale of the Commercial Operations were sold resulting in a Gain on sale of non-current assets of \$2.5 million.

Following the Québec government's decision to permanently shut down the Gentilly–2 nuclear reactor in Québec, utility owner Hydro–Québec terminated its contract with AECL to extend the life of the Gentilly–2 reactor. As a result, AECL recorded an impairment charge of \$4.7 million related to non-current assets associated with this contract.

# a) Results of Discontinued Operations

| (thousands of Canadian dollars)                      | 2013   | 2012     |
|--|--------|----------|
|  | 8      | \$       |
| Revenue  | 96,691 | 277,627  |
| Cost of sales  | 20,244 | 247,115  |
| Gross margin   | 76,447 | 30,512   |
| Operating expenses                                   | 41,315 | 126,366  |
| Operating income (loss) from Discontinued Operations | 35,132 | (95,854) |

#### Revenu

|                                 | March 31 |         |  |
|---------------------------------|----------|---------|--|
| (thousands of Canadian dollars) | 2013     | 2012    |  |
|                                 | 8        | \$      |  |
| Life extension projects         | 96,691   | 223,121 |  |
| Services                        | _        | 54,506  |  |
|                                 | 96,691   | 277,627 |  |

Information on construction contracts recognized according to the percentage of completion method that were in progress is as follows:

|  | M    | arch 31   |
|--|------|-----------|
| (thousands of Canadian dollars)                                  | 2013 | 2012      |
|  | \$   | \$        |
| Costs incurred and profits recognized, net of losses recognized* | _    | 1,779,459 |
| Customer advances*   |      | 312,910   |

<sup>\*</sup>There were no construction contracts in progress as at March 31, 2013.

The following balances included in the Consolidated Balance Sheet relate to ongoing projects and restructuring costs included in Discontinued Operations:

| (thousands of Canadian dollars)   | 2013         | 2012    |
|-----------------------------------|--------------|---------|
|                                   | \$           | \$      |
| Assets                            |              |         |
| Trade and other receivables       | 263,811      | 278,603 |
| Property, plant and equipment     | <del>-</del> | 5,258   |
| Liabilities                       |              |         |
| Trade and other payables          | 19,220       | 61,730  |
| Customer advances and obligations | 165,230      | 313,218 |
| Provisions                        | 57,909       | 120,000 |
| Restructuring provision           | 3,873        | 6,026   |
| Deferred capital funding          | _            | 187     |

### b) Net Proceeds of Transaction

Carrying the assets at fair value less costs to sell in accordance with IFRS 5 resulted in an impairment charge in the year ended March 31, 2012 of \$8.6 million.

The purchase price of the assets, in 2012, was \$15 million compared to a carrying value of \$15 million, for a net gain on sale equal to zero.

As a result of finalizing working capital adjustments, net cash transferred to AECL at the sale closing was \$1.6 million, with a further \$6.1 million received in the current fiscal year. As required by legislation, the \$7.7 million received from Candu Energy Inc. was remitted to the Corporation's Shareholder.

# 28. Subsequent Event

### Hydro Quebec

On June 21, 2013, AECL and Hydro Quebec agreed to settle the litigation that AECL had commenced against Hydro Quebec with respect to Retube and Refurbishment activities at the Gentilly-2 nuclear station. The settlement agreement is confidential but it includes the standard mutual full and final releases and waiver of any and all claims. There is no material impact on AECL's operating results as a result of this settlement agreement.

# 29. Comparative Figures

Certain of the March 31, 2012 comparative figures have been reclassified to conform to the financial statement presentation adopted in the 2012–2013 fiscal year. In the 2012 comparative figures, \$1 million has been reclassified from Cost of sales to Operating expenses in order to better reflect the nature of these expenditures. This reclassification did not have a material impact on the Consolidated Statement of Comprehensive Income (Loss). The Corporation has also reclassified certain comparative figures in the balance sheet to conform to the current financial statement presentation adopted in the 2012–2013 fiscal year. These reclassifications did not have a material impact on the Balance Sheet.

# **Board of Directors**

### Peter Currie

Appointed Chair of the Board, October 2011 AECL; Chaik Rivet, Ontario Director, Intelnis Inc., VIXS Systems Inc.

Former Executive Vice-President and Chief Financial Officer of Nortel Networks Corporation; Vice-Chairman and Chief Financial Officer for the Royal Bank of Canada; and Executive Vice-President and Chief Financial Officer at North American Life Assurance Company. Former member of the Board of Governors and Executive Committee of York University and of the Board of York University Development Corp. Former Board Chair of Symcor Inc. and Director of Toronto East General Hospital, C.D. Howe Institute, Arise Technologies Corp. and Canadian Tire Corporation Limited. Named Canada's CFO of the Year in 2003 by PricewaterhouseCoopers, Financial Executives International Canada and The Caldwell Partners International. Appointed member of the Board in October 2008.

Committees: Member, Audit (ex-officio, April 2012 – March 2013) and Human Resources & Governance (ex-officio, April 2012 – March 2013).

### Dr. Robert Walker

Appointed President and Chief Executive Offices, October 2011 AECL, Chalk Rives, Ontario

Former Senior Vice-President, Nuclear Laboratories, AECL; Assistant Deputy Minister of Science and Technology, Department of National Defence; and Chief Executive Officer of Defence Research and Development Canada. Chair of the Board of the MEOPAR Network of Centers of Excellence and former Chair of the NATO Research and Technology Board. Holds a physics degree from Acadia University, and a Master of Engineering (engineering physics), a PhD (electrical engineering) and an honorary Doctor of Science degree from McMaster University. A graduate of the National Defence College and a Fellow of the Canadian Academy of Engineering. Joined AECL in November 2010.

Committees: Member, Audit (ex-officio, April 2012 – March 2013) and Human Resources & Governance (ex-officio, April 2012 – March 2013)

### Dr. Claude Lajeunesse

President Emeritus, Ryerson University, Totonto, Ontana

Former President and CEO of the Aerospace Industries Association of Canada and the Association of Universities and Colleges of Canada. Former President of Concordia University in Montreal and Ryerson University in Toronto. Board Chair of the Green Aviation Research & Development Network and Board member of the Canada Science and Technology Museums Corporation Foundation. Former Board member of TD Insurance, SOFINOV (Caisse de dépôt et placement du Québec) and of the Toronto East General Hospital. Holds a PhD in nuclear engineering from Rensselaer Polytechnic Institute in New York. Appointed March 2005.

Committees: Chair, Human Resources & Governance (April 2012 - March 2013).

#### Dr. John Luxat

Professor and NSERC/UNENE Industrial Research Chair in Nuclear Safety Analysis, McMaster University

Former Vice-President and Board Director of Nuclear Safety Solutions Limited with 32 years of experience in the Canadian nuclear industry. Past-President and Treasurer of the Canadian Nuclear Society. Principal Investigator, Nuclear Ontario research network. Member of the Canadian and American Nuclear Societies and of the Advisory Board of the International Association for Structural Mechanics in Reactor Technology. Holds a PhD in electrical engineering from the University of Windsor. Appointed October 2008.

Committees. Member, Human Resources & Governance (April 2012 - March 2013).

### Barbara Trenholm

Professor Emerita, Faculty of Business Administration, University of New Brunswick

A Fellow Chartered Accountant, current directorships include Plazacorp Retail Properties Ltd. Member of the Institute of Corporate Directors. Awards include the National Post/ PricewaterhouseCoopers Leaders in Management Education Award, the Global Teaching Excellence Award, and University of New Brunswick Merit Award and Dr. Allan P. Stuart Award for Excellence in Teaching. Former member of the Canadian Institute of Chartered Accountant's Board of Directors, Past-President of the New Brunswick Institute of Chartered Accountants, and former Acting Dean of the University of New Brunswick's Faculty of Business Administration. Appointed June 2002.

Committees: Chair, Audit (April 2017 - March 2013).

## Serge Dupont

Deputy Minister, Natural Resources Canada

Former Associate Deputy Minister; Deputy Minister of Intergovernmental Affairs (Privy Council Office) and Special Adviser to the Minister of Natural Resources on Nuclear Energy Policy with 30 years of public sector experience. Occupied senior positions in Finance Canada, including Assistant Deputy Minister, Financial Sector Policy, and Director General (Analysis), Tax Policy. Holds a B.Sc. from the University of Ottawa, an M.A.Sc from the University of Waterloo in Management Sciences and an international diploma in public administration from Ecole nationale d'administration in Paris. Serves on Board of Directors of the Public Policy Forum. Appointed March 2013.

# Gregory Josey

Principal, FORTEN Performance Consulting Inc.

Former Vice President, Finance, and Chief Financial Officer at McNeil Consumer Healthcare, Johnson & Johnson Inc., and Johnson & Johnson — Merck Consumer Pharmaceuticals with over 30 years of executive leadership experience. Former Officer and Director of Johnson & Johnson Inc. Canada, Chair of Johnson & Johnson Canadian CFO Council and member of the Ontario CNIB Advisory Board. Holds an H.B.B.A. from Wilfred Laurier University and is a Certified Management Accountant. Appointed March 2013.

### Peter Currie

Chair of the Board

### Robert Walker

President & Chief Executive Officer

### Lynne Campbell

Vice-President, Human Resources

### Richard Coté

Vice-President, Commercial, Nuclear Laboratories

### Richard Fujarczuk

Vice-President, General Counsel & Corporate Secretary

## Steven Halpenny

Vice-President & Chief Financial Officer

# William Kupferschmidt

Vice-President, Research & Development

# Randy Lesco

Vice-President, Operations & Chief Nuclear Officer

# Jon Lundy

Senior Vice-President & General Manager, Wrap-Up Office

### Joan Miller

Vice-President, Decommissioning & Waste Management

### Yvonne Penning

Vice-President, General Counsel, Wrap-Up Office

# Corporate Governance

The corporate governance structure of AECL is similar to that of other corporations incorporated pursuant to the *Canada Business Corporations Act* with the following important exceptions:

- i. AECL is an agent and a parent Crown corporation and is subject to the provisions of Part X of the Financial Administration Act ("FAA") of Canada:
- ii. The sole shareholder of AECL is the Government of Canada as represented by the Minister of Natural Resources; and,
- iii. AECL's Directors, the Board Chair and the President and Chief Executive Officer are appointed by the Government of Canada by Order-in-Council.

2012—2013 was the first full year for the corporation after the initial phase of the restructuring of the organization that resulted in the divestiture of the Commercial Operations division. In 2012—2013, AECL operated as a stand-alone science and technology organization from its new corporate headquarters at the Chalk River Laboratories in Chalk River, Ontario. This was also the first full year with a smaller board comprised of seven directors.

In 2012–2013, the Board provided oversight of the transition to the new stand-alone organization; gave direction, input and evaluation of AECL's strategic plans; implemented a revised delegated approval framework; authorized revisions to the Program Activity Architecture; and, approved major contracts and initiatives. Throughout the fiscal year, a major focus for the Board and its Audit and Human Resources & Governance committees was the provision of effective internal governance over the second phase of the restructuring of AECL which is concentrated on the Nuclear Laboratories. The Board enacted new charters for the two committees to ensure that they exercised oversight on all matters addressed under the previous committee structure and provided appropriate levels of oversight over business risk and other related risks.

AECL's corporate governance framework reflects best practices as outlined in the Treasury Board of Canada Secretariat's Corporate Governance Guidelines for Crown corporations. The Board of Directors recognizes that effective governance requires continuous improvement of corporate processes and practices necessary to ensure a high level of accountability to stakeholders.

In 2012—2013, AECL continued to implement and strengthen its governance activities to enhance stronger accountability, transparency and confidence throughout the organization. In particular, the Board undertook the following initiatives during the year:

- Adopted new Charters (as noted above) incorporating corporate governance best practices for the two committees (Audit and Human Resources & Governance) in the new corporate committee structure;
- > Exercised an enhanced oversight role in respect of matters related to Health, Safety, Security and the Environment;
- > Played a greater role in nuclear safety by having direct line-of-sight to the Chief Nuclear Officer;
- Provided significant due diligence and perspectives as the Government of Canada continued with the second phase of its restructuring of AECL;
- Provided appropriate oversight as AECL's Wrap-Up Office dealt with the resolution of legal liabilities that had been retained by AECL as part of the transaction by which the Commercial Operations division divestiture was implemented;
- > Through the Board Chair, provided input to NRCan on the second phase of the restructuring of AECL; and
- > Continued to provide regular reporting to the Minister of Natural Resources with respect to the Board's fulfilment of its governance role and accountabilities.

#### The Board

During the fiscal year the Board was comprised of seven members, six of whom were independent from the company in the sense that they were not management, nor did they have any interest, business or other relationship with the company. The seventh member of the Board was the Chief Executive Officer of AECL.

AECL's business affairs are governed by the Board of Directors, which provides key stewardship functions as set out in the Board Charter. These responsibilities include oversight for financial management, the identification of principal risks, approval of the strategic direction of the organization, examination of the corporation's public policy objectives, as well as meeting its overall legal requirements.

The following table sets forth the record of attendance for Board and Committee meetings for each of the Directors over the past fiscal year. The compensation of the Board complies with the Remuneration Guidelines for part-time Governor in Council Appointees. As President and CEO of AECL, Robert Walker was considered a non-independent Director and as a result, did not receive compensation as a Director. Serge Dupont also did not receive compensation as a Director, since he is already compensated for his role as Deputy Minister of Natural Resources Canada.

The Board regularly assesses its effectiveness and functioning through an assessment process using independent external expertise. The Board has also created Director standards that set out the skills and criteria required to be an effective member of the Board of Directors. These criteria are aligned with the Corporate Governance Guidelines for Crown corporations issued by the Privy Council Office, and an orientation process is in place to familiarize new Directors with the standards. The Board has approved a number of governance policies and procedures to assist it in fulfilling its role and responsibilities.

### Director Attendance At Board & Committee Meetings, 2012-2013

| Director                 | Audit<br>(7 meetings) | Human Resources<br>& Governance<br>(7 meetings) | Board of<br>Directors<br>(14 meetings |  |
|--------------------------|-----------------------|---|---------------------------------------|--|
| P. Currie                | 7/7                   | 7/7   | 13/14                                 |  |
| R. Walker                | 7/7                   | 7/7   | 14/14                                 |  |
| R. Boudreault 1          | 4/6                   | N/A   | 12/13                                 |  |
| C. Lajeunesse            | N/A                   | 7/7   | 14/14                                 |  |
| J. Luxat                 | N/A                   | 6/7   | 14/14                                 |  |
| S. Thompson <sup>1</sup> | 6/6                   | 6/6   | 13/13                                 |  |
| B. Trenholm              | 7/7                   | N/A   | 14/14                                 |  |
| S. Dupont <sup>3</sup>   | 1/11                  | 1/13  | 1/1                                   |  |
| G. Josey <sup>2</sup>    | 1/1                   | 1/12  | 1/1                                   |  |

- 1 Departed Roard on March 7, 2013
- 2 Appointed to the Board on March 7, 2013
- 3. Attended meeting as quest.

# Five-Year Consolidated Financial Summary

(Unaudited)

| (millions of dollars)                                | 2013    | 2012*   | 2011* | 2010* | 2009*  |
|--|---------|---------|-------|-------|--------|
|  | 8       | \$      | \$    | \$    | \$     |
| Nuclear Laboratories                                 |         |         |       |       | 200    |
| Revenue  | 87      | 76      | 52    | 33    | 65     |
| Funding  | 45      | 28      | 22    | 12    | 8      |
| Interest revenue                                     | 8       | 10      | 11    | .11   | 14     |
| Net loss before decommissioning and                  |         |         |       | (215) | (2.17) |
| waste management                                     | (325)   | (311)   | (324) | (315) | (247)  |
| Decommissioning and Waste Management                 |         |         |       |       |        |
| Funding  | 133     | 137     | 126   | 115   | 105    |
| Revaluation loss on decommissioning and              |         |         |       |       |        |
| waste management liability and other                 | (2.120) | 1.510   | -21   | 0.5   | 103    |
| and financial expenses                               | (2,426) | 1,518   | 634   | 86    | 182    |
| Net loss from continuing operations                  | (2,618) | (1,692) | (832) | (286) | (324)  |
| Commercial Operations (Discontinued Operations)      |         |         |       | 170   | 222    |
| Revenue  | 97      | 278     | 446   | 428   | 322    |
| Operating income (loss) from discontinued operations | 35      | (96)    | (247) | (491) | (469)  |
| Impairment of long-lived assets                      | (5)     | (9)     | (205) | -     | _      |
| Gain on sale of non-current assets                   | 2       | _       | _     | _     | -      |
| Restructuring charge                                 | _       | (31)    | _     | -     |        |
| Net income (loss) from discontinued operations       | 33      | (136)   | (452) | (491) | (469)  |
| Parliamentary Appropriations                         |         |         |       |       |        |
| Operating and capital                                | 552     | 719     | 793   | 822   | 528    |
| Recognition of deferred development funding          |         | _       | 205   | _     | -      |
|  |         |         |       |       |        |
| Financial Position                                   | 2013    | 2012*   | 2011* | 2010* | 2009*  |
| Cash, cash equivalents and short-term investments    | 35      | 35      | 19    | 48    | 33     |
| Heavy water inventory                                | 290     | 291     | 291   | 292   | 294    |
| Capital expenditures                                 | 55      | 45      | 39    | 50    | 51     |
| Property, plant and equipment                        | 286     | 263     | 239   | 231   | 191    |
| Decommissioning and waste management provision       | 7,970   | 5,679   | 4,255 | 3,085 | 3,100  |
| Long-term payables (excludes current portion)        | -       |         | 6     | 18    | 30     |
| Other  |         |         | 1.020 | 4.057 | 4.0/51 |
| Number of full-time employees                        | 3,285   | 3,214   | 4,830 | 4,957 | 4,891  |

<sup>\*</sup>Certain amounts have been reclassified to contour to the 2014 financial statement presentation. The amounts reflected for 2009 and 2010 are reported under previous Canadian GAAP.

# **AECL Offices**

# Head Office

Chalk River Laboratories

Chalk River, Ontario Canada KOJ 1JO

Wrap-Up Office

2030 Bristol Circle, Suite 210

Oakville, Ontario Canada L6H 0H2

Whiteshell Laboratories

Pinawa, Manitoba Canada ROE 1LO

Port Hope Area Initiative

Management Office

115 Toronto Road Port Hope, Ontario

Canada L1A 3S4

Low-Level Radioactive

Waste Management Office

National Office

196 Toronto Road

Port Hope, Ontario

Canada L1A 3V5

Ottawa Office

Place de Ville, Tower B

112 Kent Street, Suite 501

Ottawa, Ontario

Canada K1A OS4

Low-Level Radioactive

Waste Management

1900 City Park Drive

Suite 200

Ottawa, Ontario

Canada K1J 1A3

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www.aecl.ca

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Canada







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